



BRIGHTTEK
BRIGHTTEK (EUROPE) LIMITED

BRIGHTTEK

2016 Catalogue

- **SMD: Top View, Side View,
Reverse Mount, Lead Frame**

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TOP VIEW

Top View

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PCB / CHIP LED

0402 (1005)



Features:

- Low Power LED
- Top View
- Various Colour
- Ultra Small Package
- Compatible Package
- High Efficiency
- Excellent White Balance

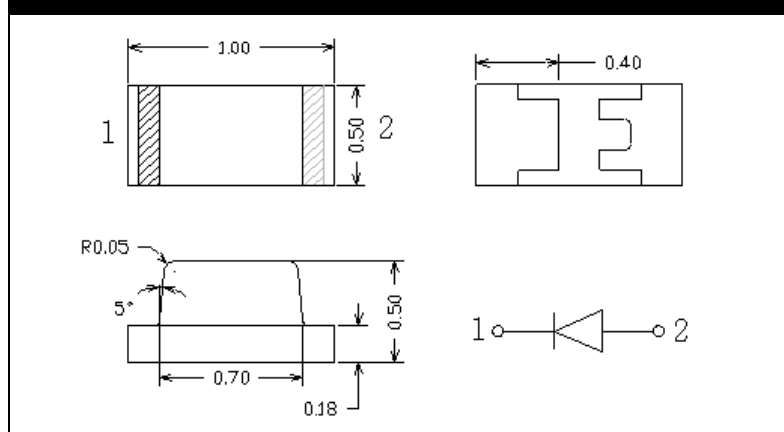
Applications:

- HD Display
- Decorative Lighting
- Indication Lamps
- 3C Consumer Goods

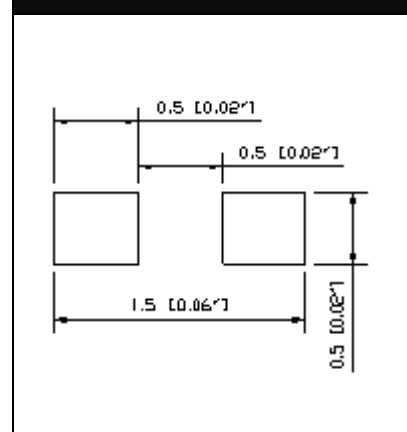
Colour Electrical & Optical Characteristics

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR21S60	Red	615-630nm	140	110	1.9	5	30
NOY21S61	Yellow	585-595nm	140	94	1.9	5	30
NOG26S71	Green	565-576nm	140	30	2.0	20	30
NOG21S59	Green	520-530nm	140	250	2.6	5	30
NOB21S58	Blue	460-470nm	140	35	2.7	5	30

Package Dimensions (mm)

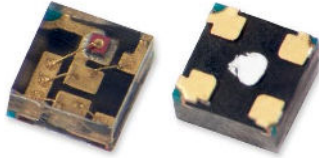


Recommended Solder Pattern



PCB / CHIP LED

0404 (1010) RGB



Features:

- Low Power LED
- Top View
- Multi-Colour
- Flat Lens
- Black PCB Material
- Compatible Package
- High Efficiency
- Excellent White Balance

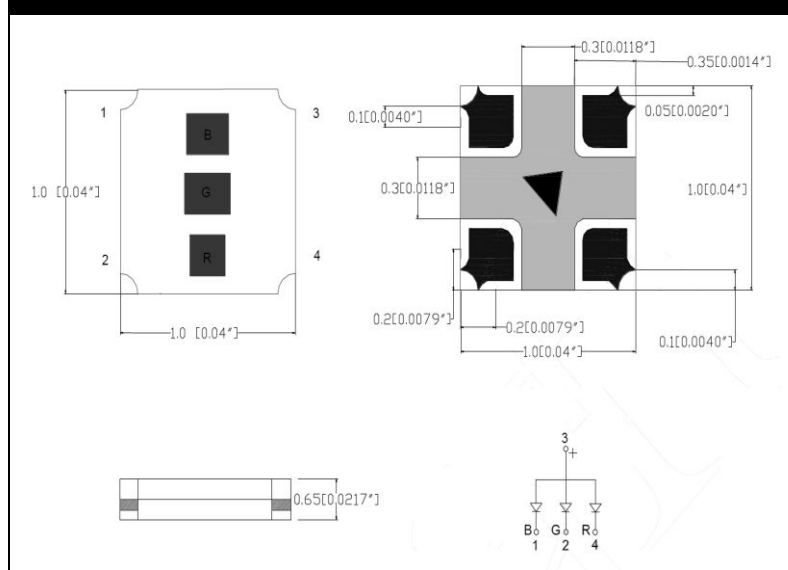
Applications:

- Decorative Lighting
- HD Display
- Indication Lamps
- 3C Consumer Goods

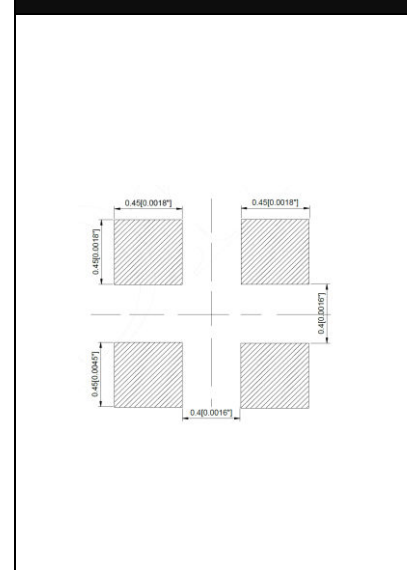
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
NOM12S63	Red/Green/Blue 	622/531/470nm	140	60/95/17	2.1/3.1/3.1	10/5/5
NOM12S82	Red/Green/Blue 	627/527/463nm	120	150/320/70	1.9/3.2/3.2	20/20/20
NOM00S70	Red/Green/Blue 	622/527/470nm	120	150/320/70	1.9/3.2/3.2	20/20/20

Package Dimensions (mm)

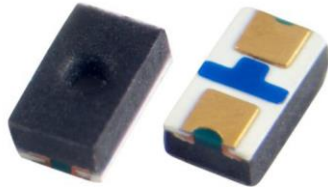


Recommended Solder Pattern



PCB / CHIP LED

0603BF (1608)



Features:

- Low Power LED
- Top View
- Narrow Viewing Angle
- No Side Leak Package
- Compatible Package
- High Efficiency
- High Lumen Output

Applications:

- Indication Lamps
- Keyboard Backlight
- 3C Consumer Goods

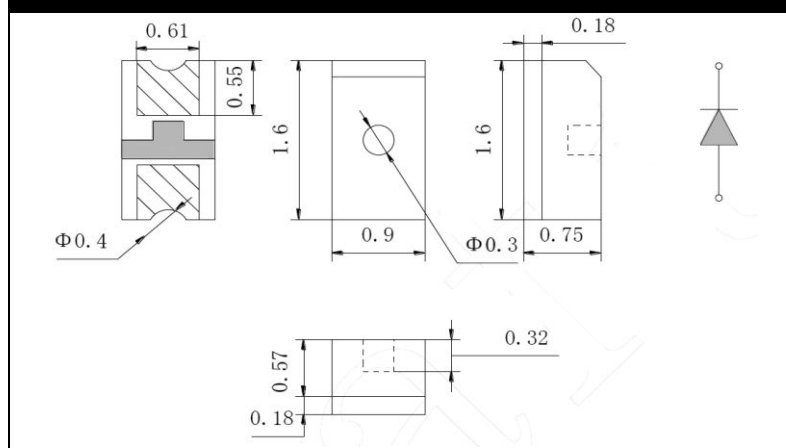
Electrical & Optical Characteristics (typ. at 5mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W14S85BF	Sky White	8300-86500K	50	13	3.0	5	20

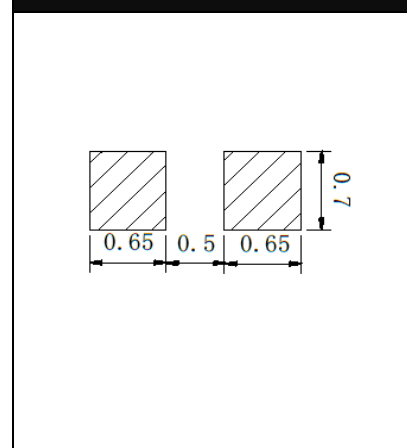
Colour Electrical & Optical Characteristics (typ. at 5mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R14S83BF	Red	615-630nm	50	11	1.9	5	20
N0A14S80BF	Amber	600-615nm	50	11	1.9	5	20
N0Y14S84BF	Yellow	585-595nm	50	11	1.9	5	20
N0G19S24BF	Green	562-576nm	50	4.5	1.9	5	20
N0B26S70ZBF	Blue	462-473nm	50	10	3.0	5	20

Package Dimensions (mm)



Recommended Solder Pattern



PCB / CHIP LED

0603 (1608) 0.4t



Features:

- Low Power LED
- Top View
- Various Colour
- 4mm inn Height
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Backlighting
- Light Strip

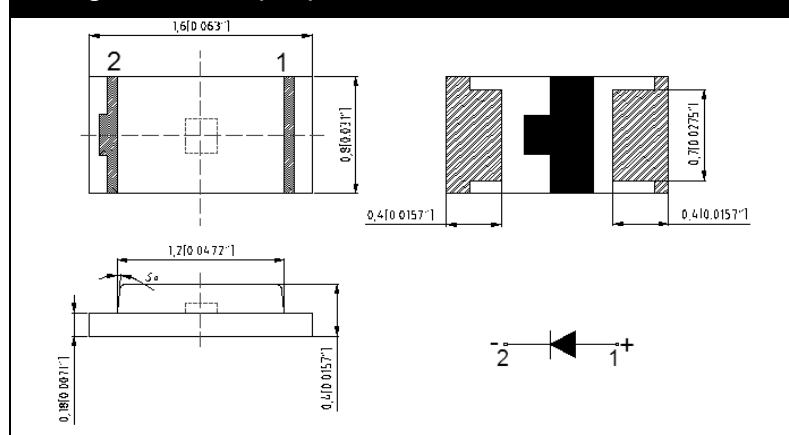
Electrical & Optical Characteristics (typ. at 5mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W04S84	Sky White	6500-12000K	140	125	3.1	5	30

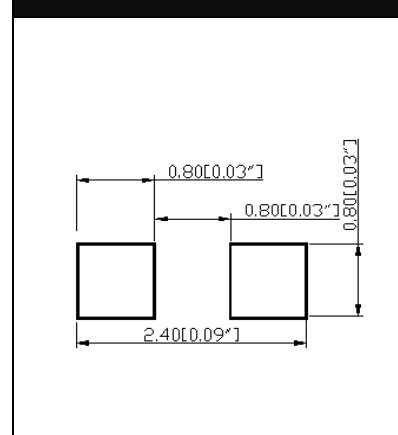
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R08S67	Red	620-630nm	140	150	2.0	20	30
N0A12S91	Amber	597-612nm	140	120	2.1	20	30
N0Y12S94	Yellow	585-595nm	125	125	2.1	20	30
N0G12S99	Green	565-576nm	140	10	2.2	20	30
N0G04S88	Green	565-576nm	140	30	2.2	20	30
N0G03S25	Green	520-533nm	140	400	3.1	20	30
N0B12S64	Blue	465-475nm	140	125	3.1	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PCB / CHIP LED

0603 (1608) 0.6t



Features:

- Low Power LED
- Top View
- Various Colour
- 6mm inn Height
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Backlighting
- Light Strip

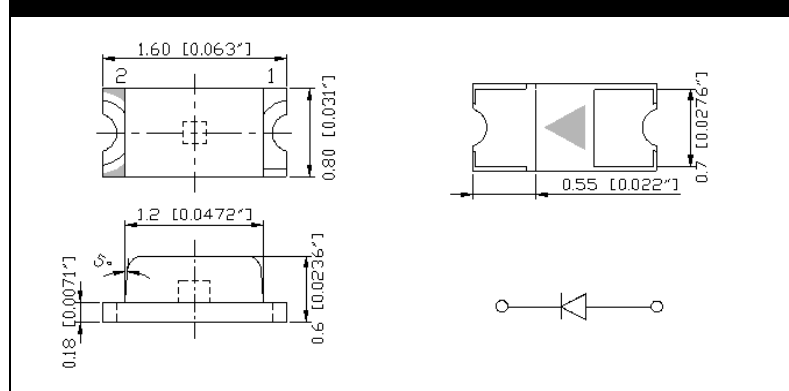
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W07S12	Sky White	6500-120000K	140	450	3.1	20	30
N0W05S29	Sky White	6500-120000K	140	750	3.1	20	30

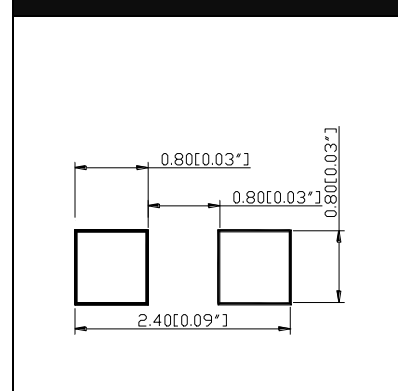
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R01S24	Red	635-650nm	140	80	2.2	20	30
N0R10S13	Red	630-650nm	140	12	2.2	20	30
N0R05S27	Red	620-630nm	140	150	2	20	30
N0R06S87	Red	620-630nm	125	350	2	20	30
N0A04S79	Amber	600-610nm	140	120	2.1	20	30
N0Y12S84	Yellow	585-595nm	140	150	2.2	20	30
N0G05S23	Green	565-576nm	140	10	2.2	20	30
N0G04S80	Green	565-576nm	140	50	2	20	30
N0G12S86	Green	520-535nm	140	400	3.1	20	30
N0G00S11	Green	520-533nm	140	650	3.1	20	30
N0B05S22	Blue	465-475nm	125	90	3.1	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PCB / CHIP LED

0603 (1608) 0.8t



Features:

- Low Power LED
- Top View
- Various Colour
- 8mm inn Height
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Backlighting
- Light Strip

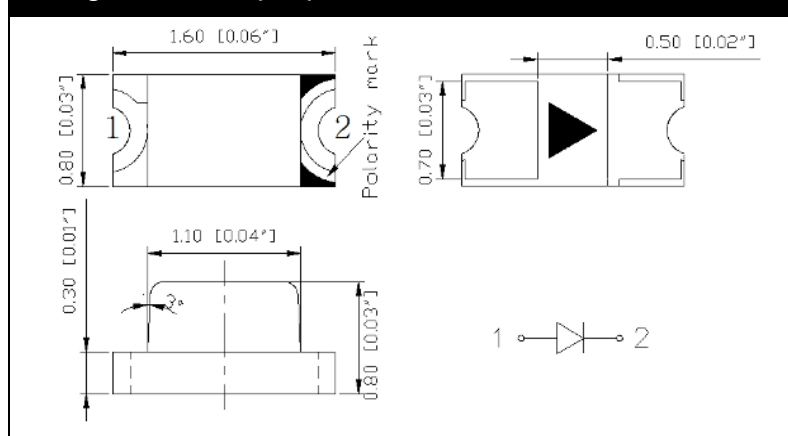
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W11S57	Sky White	5600-46500K	140	390	3.1	20	30

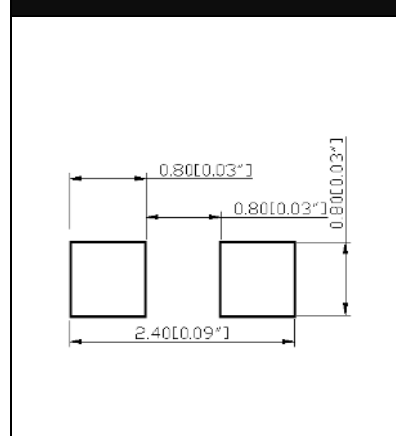
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R11S56	Red	625-635nm	140	100	2.0	20	30
N0R11S55	Red	615-630nm	140	165	2.1	20	30
N0Y11S58	Yellow	585-595nm	140	150	2.0	20	30
N0G11S53	Green	565-576nm	140	40	2.0	20	30
N0G11S54	Green	520-530nm	140	450	3.2	20	30
N0B11S52	Blue	455-465nm	140	50	3.1	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PCB / CHIP LED

0603 (1608) Dual Colours



Features:

- Low Power LED
- Top View
- Dual Colours
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

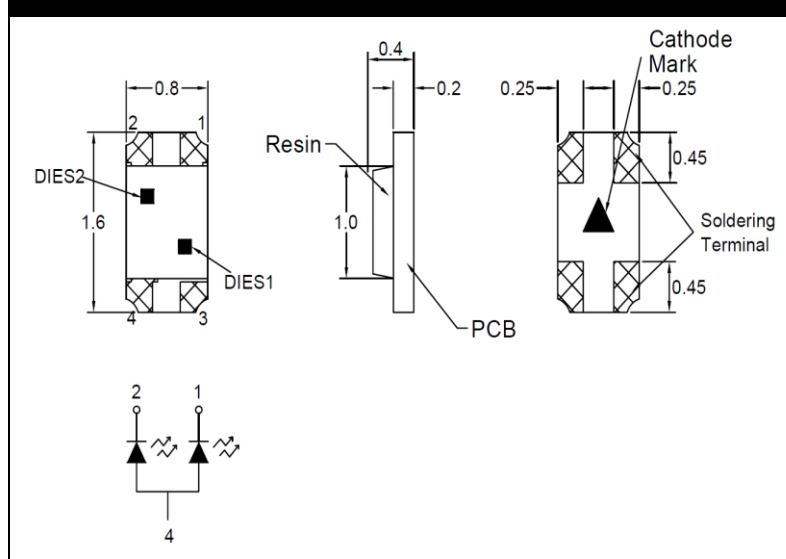
Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Light Strip

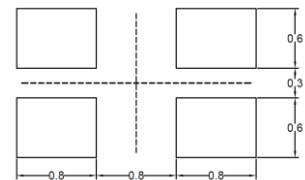
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K) / WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0D25S60	Sky White/Red 	9000K/530nm	130	500/50	3.2/2.4	20/20
N0D25S59	Red/Green 	630/574nm	130	80/50	1.9/2.0	20/20
N0D25S58	Red/Blue 	630/470nm	130	50/32	2.1/3.5	20/20

Package Dimensions (mm)

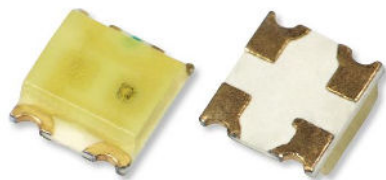


Recommended Solder Pattern



PCB / CHIP LED

0606 (1615) Dual Colours



Features:

- Low Power LED
- Top View
- Dual Colours
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

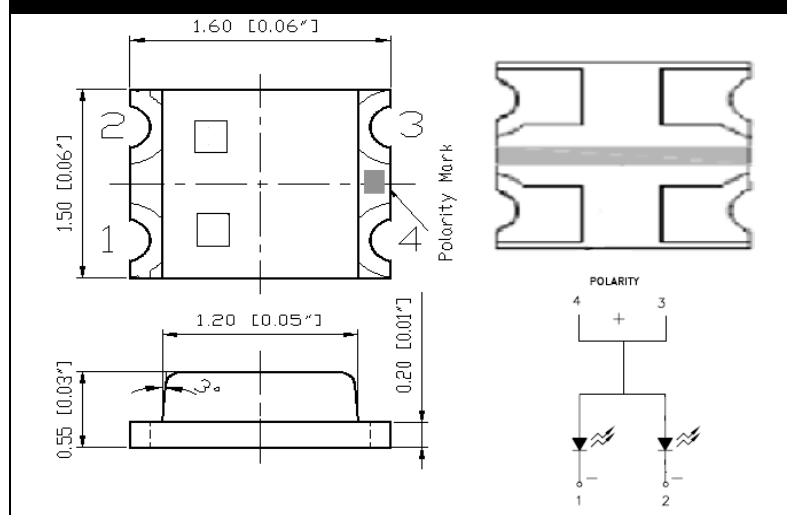
Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Backlighting
- Light Strip

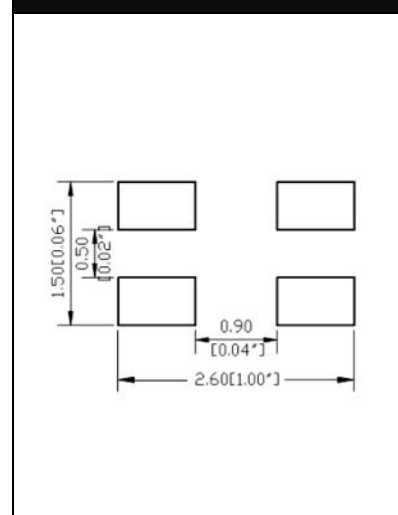
Colour Electrical & Optical Characteristics

Order Code	Colour	CCT (K) / WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0D19S26	Cool White/Amber	6000K/605nm	140	25/180	2.0/3.0	5/5
N0D19S31	Sky White/Yellow	13000K/590nm	140	50/110	2.1/2.9	5/5
N0D11S93	Red/Green	630/525nm	140	100/420	2.0/3.2	20/20
N0D25S61	Red/Green	630/574nm	130	80/50	1.8/1.9	20/20
N0D01S79	Red/Green	622/570nm	140	125/55	1.9/1.9	20/20
N0D11S92	Red/Green	620/570nm	140	150/35	2.0/2.0	20/20
N0D19S28	Red/Green	622/527nm	140	150/400	2.0/3.2	20/20
N0D25S62	Red/Blue	630/470nm	120	80/180	1.8/3.2	20/20
N0D19S29	Red/Blue	625/470nm	140	25/25	1.7/2.9	5/5
N0D11S80	Red/Blue	622/465nm	140	150/55	2.0/3.2	20/20
N0D05S32	Yellow/Green	590/570nm	140	95/30	2.0/2.0	20/20
N0D19S30	Yellow/Blue	590/470nm	140	35/36	2.0/2.8	5/5
N0D19S27	Green/Blue	525/470nm	140	330/60	3.1/3.3	10/10

Package Dimensions (mm)



Recommended Solder Pattern



PCB / CHIP LED

0606 (1615) RGB



Features:

- Low Power LED
- Top View
- Multi Colours
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

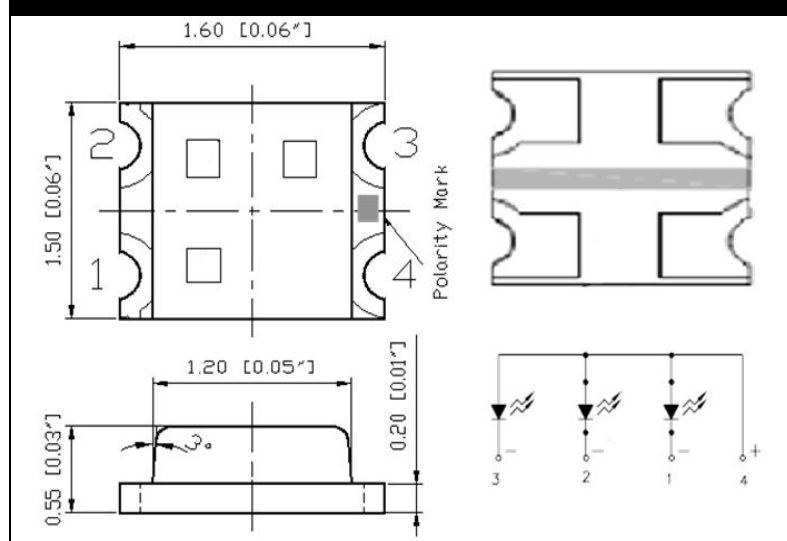
Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Backlighting
- Light Strip

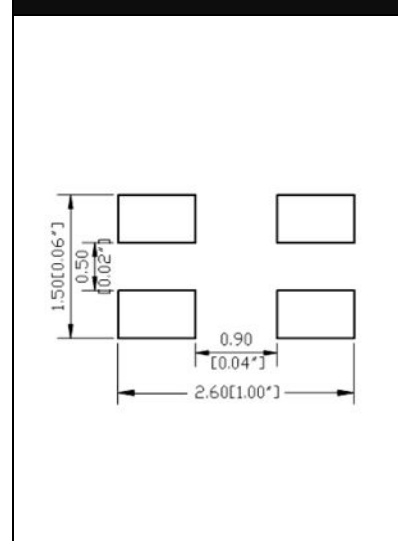
Colour Electrical & Optical Characteristics

Order Code	Colour	WL (nm)	2 $\theta_{1/2}$ (°)	I _v (mcd)	V _F (V)	I _F (mA)
NOM16S65	Red/Green/Blue 	620/570/467nm	140	42/11/37	1.9/1.9/2.8	5/5/5
NOM01S15	Red/Green/Blue 	625/530/470nm	140	45/200/35	2.0/3.0/2.9	5/5/5
NOM00S03	Red/Green/Blue 	623/523/465nm	120	130/390/40	2.1/3.0/3.0	20/15/10
NOM11S81	Red/Green/Blue 	620/520/470nm	140	125/380/75	2.0/3.4/3.1	20/20/20
NOM25S63	Red/Green/Blue 	625/525/470nm	140	140/450/220	2.1/3.2/3.2	20/20/20
NOM11S82	Red/Yellow/Green 	640/590/570nm	140	60/150/12	2.0/2.0/2.0	20/20/20

Package Dimensions (mm)

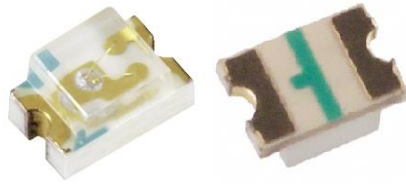


Recommended Solder Pattern



PCB / CHIP LED

0805 (2012) 0.8t



Features:

- Low Power LED
- Top View
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Backlighting
- Light Strip

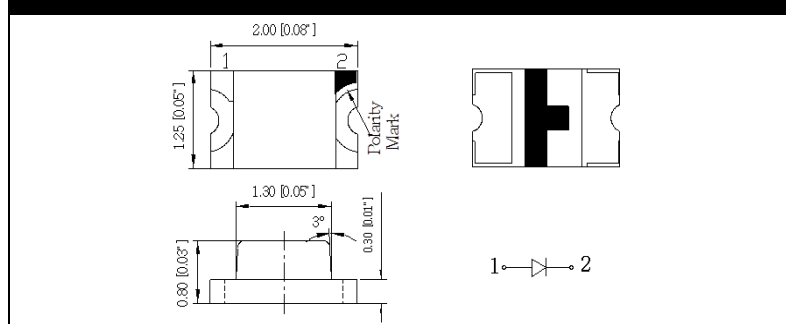
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOW10S52	Sky White	5600-46500K	140	390	3.1	20	30
NOW02S38	Cool White	4300-24000K	130	600	3.1	20	30

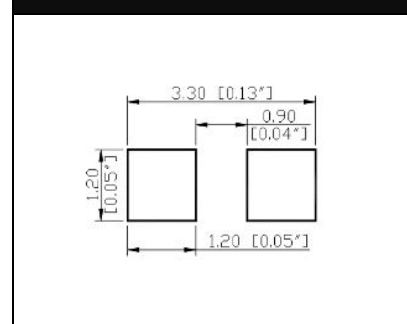
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR10S51	Red	625-635nm	140	110	2.0	20	30
NOR01S15	Red	620-630nm	140	500	2.0	20	30
NOR10S50	Red	615-630nm	140	170	2.0	20	30
NOR18S54	Red	615-630nm	140	400	2.0	20	30
NOR01S95	Red	615-630nm	130	150	2.1	20	30
NOY02S10	Yellow	586-596nm	130	100	2.1	20	30
NOY10S53	Yellow	585-595nm	140	150	2.0	20	30
NOY01S17	Yellow	585-595nm	140	470	2.0	20	30
NOG02S09	Yellow	568-576nm	130	65	2.1	20	30
NOG18S88	Green	566-576nm	140	10	1.9	20	25
NOG10S48	Green	565-576nm	140	40	2.0	20	30
NOG10S40	Green	520-532nm	130	600	3.2	20	30
NOG01S16	Green	520-530nm	140	1100	3.2	20	30
NOG10S49	Green	520-530nm	140	450	3.2	20	30
NOB10S47	Blue	465-475nm	140	120	3.1	20	30
NOB00S92	Blue	465-475nm	120	72	3.1	20	30
NOB01S14	Blue	460-470nm	140	150	3.0	20	30

Package Dimensions (mm)

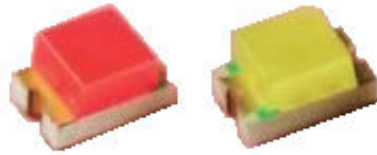


Recommended Solder Pattern



PCB / CHIP LED

0805 (2012) 1.1t



Features:

- Low Power LED
- Top View
- Various Colour
- Clear Lens / Diffused Lens
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Backlighting
- Light Strip

White Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOW10S45	Sky White	5600-46500K	140	270	3.1	20	30
NOW11S06	Cool White	5100-19500K	140	230	3.0	20	30
NOW11S05	Natural White	4200-5300K	140	140	2.9	20	30
NOW11S04	Warm White	1800-3100K	140	190	2.8	20	30

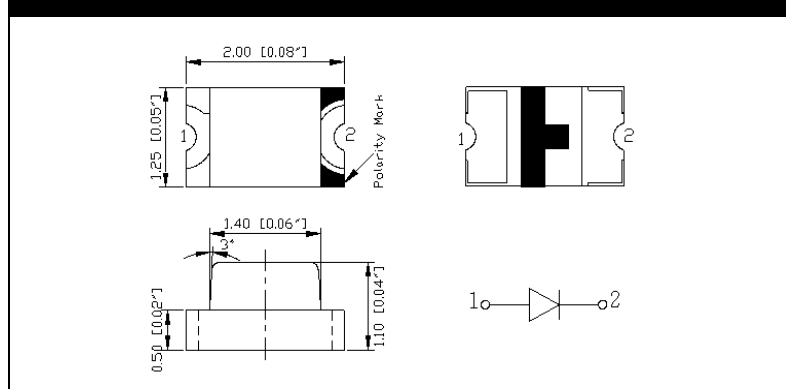
Colour Electrical & Optical Characteristics (typ. at 20mA) Clear Lens

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR10S44	Red	625-635nm	140	110	2.0	20	30
NOR10S43	Red	615-630nm	140	170	2.0	20	30
NOY10S46	Yellow	585-595nm	140	150	2.1	20	30
NOG10S42	Green	565-576nm	140	35	2.0	20	30
NOG10S37	Green	520-530nm	140	450	3.2	20	30
NOB10S41	Blue	465-475nm	140	120	3.1	20	30

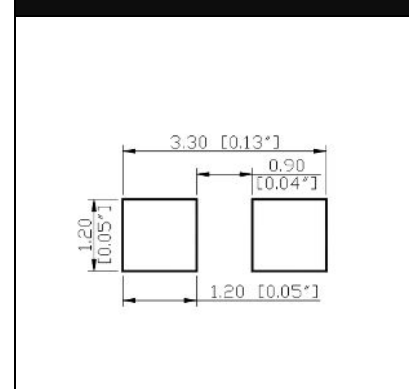
Colour Electrical & Optical Characteristics (typ. at 20mA) Colour Diffused Lens

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR17S64P	Red	615-630nm	140	9	2.0	20	30
NOY17S65P	Yellow	585-595nm	140	5.5	2.0	20	30
NOG17S63P	Green	565-576nm	140	12.5	2.2	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PCB / CHIP LED

0805 (2012) Dual Colours / RGB



Features:

- Low Power LED
- Top View
- Dual Colours / RGB
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

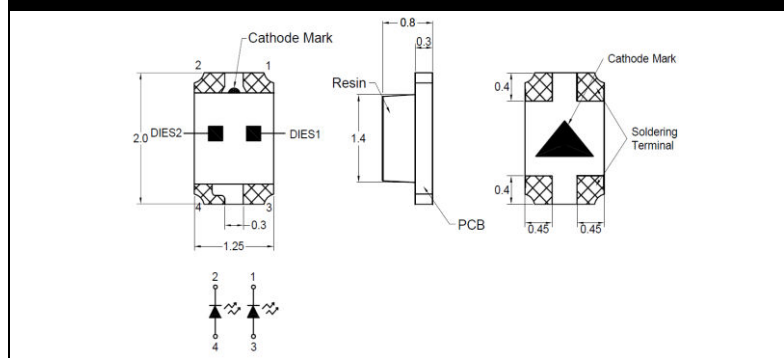
Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Light Strip

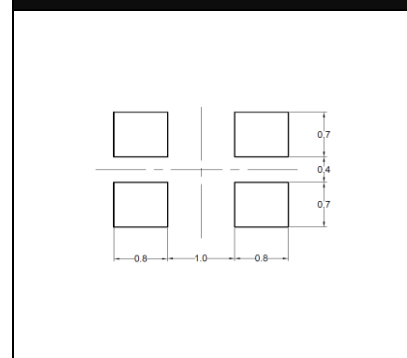
Dual Colours Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K) / WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0D25S66	Cool White/Red	5300K/630nm	120	370/65	3.2/1.9	20/20
N0D25S64	Red/Green	630/574nm	140	60/50	1.8/1.9	20/20
N0D17S24	Red/Green	620/570nm	140	140/40	2.0/2.0	20/20
N0D25S65	Red/Blue	630/470nm	130	60/60	1.9/3.5	20/20

Package Dimensions (mm)



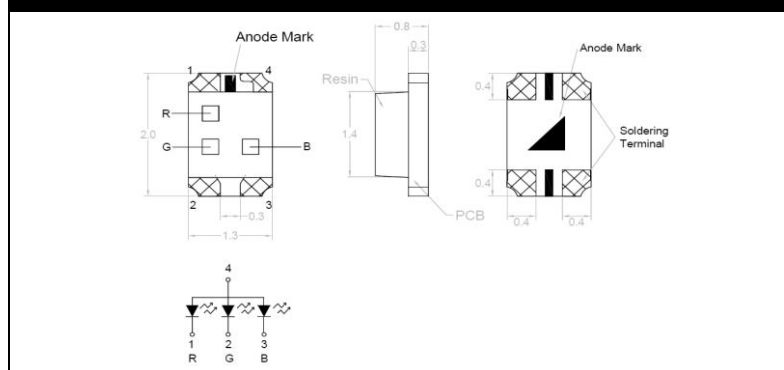
Recommended Solder Pattern



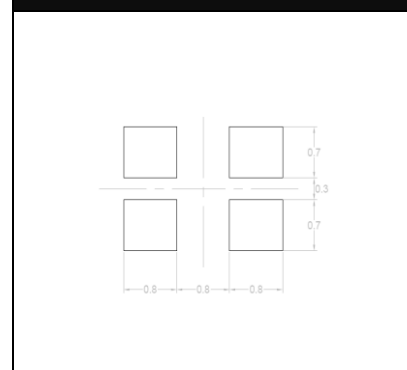
RGB Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0M25S67	Red/Green/Blue	630/525/470nm	120	100/500/125	1.9/3.2/3.2	20/20/20

Package Dimensions (mm)



Recommended Solder Pattern



PCB / CHIP LED

0807 (2018) Dual Colours / RGB



Features:

- Low Power LED
- Top View
- Dual Colours / RGB
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

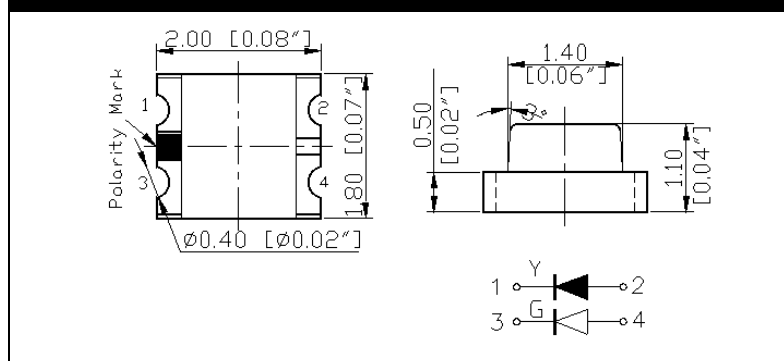
Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Light Strip

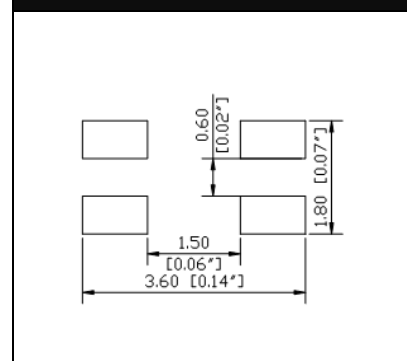
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0D11S83	Yellow/Green 	590/570nm	140	170/45	2.0/2.0	20/20

Package Dimensions (mm)



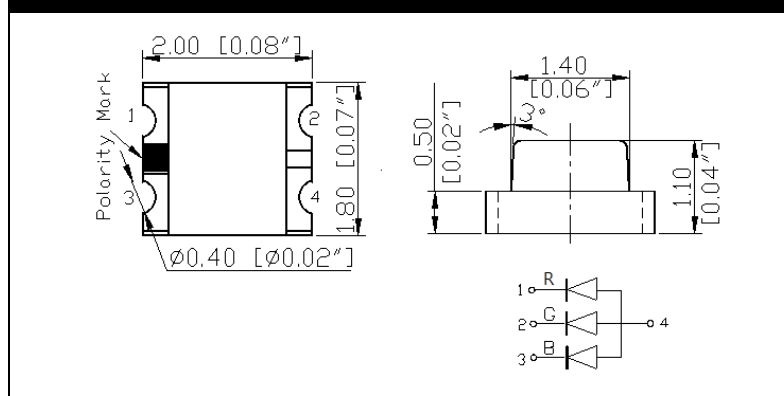
Recommended Solder Pattern



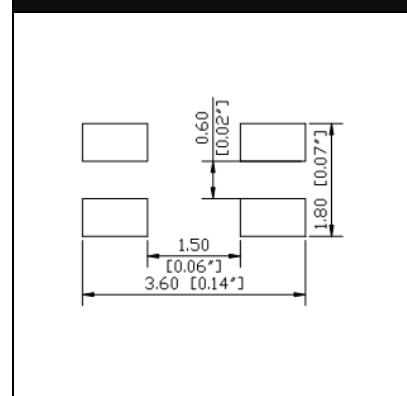
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0M11S84	Red/Green/Blue 	620/525/470nm	140	150/540/95	2.0/3.1/3.1	20/20/20

Package Dimensions (mm)



Recommended Solder Pattern



PCB / CHIP LED

1206 (3015)



Features:

- Low Power LED
- Top View
- Various Colour
- Narrow Viewing Angle
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Light Strip

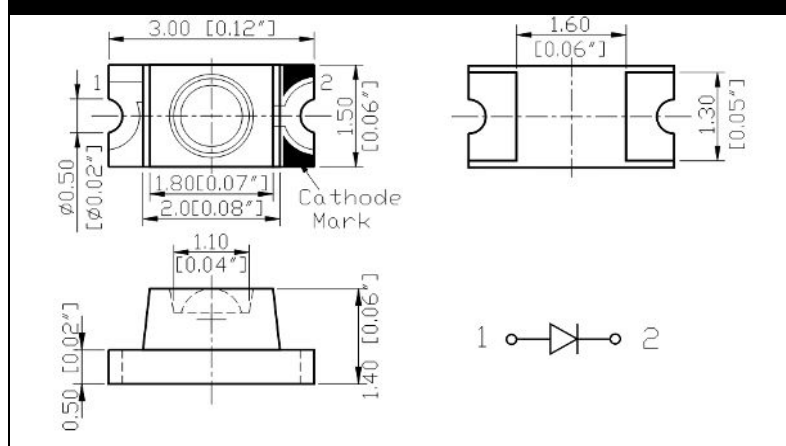
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W11S02	Sky White	5600-46500K	165	320	3.2	20	30

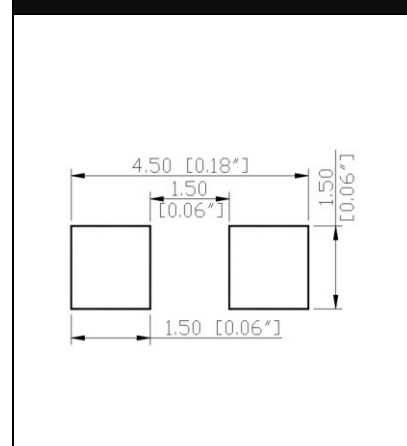
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R11S01	Red	620-635nm	40	450	2.0	20	30
N0R11S00	Red	615-630nm	40	600	2.0	20	30
N0R24S32	Red	615-630nm	40	1900	2.0	20	30
NOY11S03	Yellow	585-595nm	40	660	2.0	20	30
NOG10S99	Green	565-576nm	40	150	2.2	20	30
NOG24S31	Green	565-576nm	40	260	2.0	20	30
NOG17S00	Green	520-530nm	40	2500	3.1	20	30
N0B10S98	Blue	465-475nm	40	430	3.2	20	30
N0B24S30	Blue	460-470nm	40	790	3.0	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PCB / CHIP LED

1206 (3216) 0.8t



Features:

- Low Power LED
- Top View
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

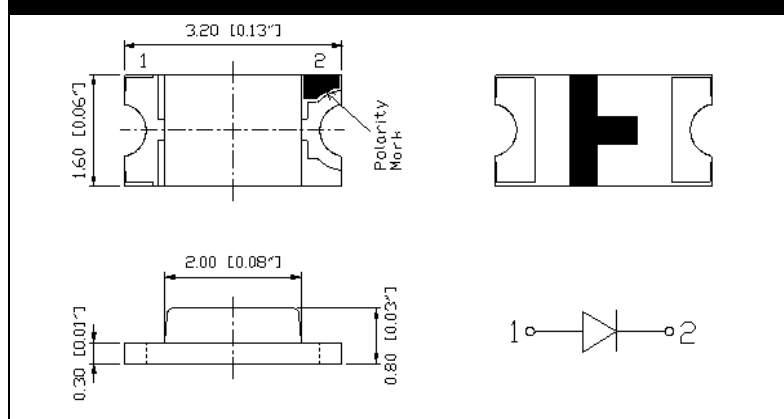
Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Light Strip

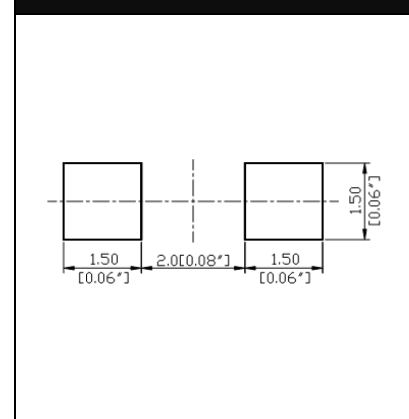
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR11S22	Red 	625-635nm	140	110	2.0	20	30
NOR11S21	Red 	615-630nm	140	170	2.0	20	30
NOY11S23	Yellow 	585-595nm	140	150	2.0	20	30
NOG11S19	Green 	565-576nm	140	45	2.0	20	30
NOG11S20	Green 	520-530nm	140	540	3.2	20	30
NOB11S18	Blue 	460-470nm	140	130	3.2	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PCB / CHIP LED

1206 (3216) 1.1t



Features:

- Low Power LED
- Top View
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Light Strip

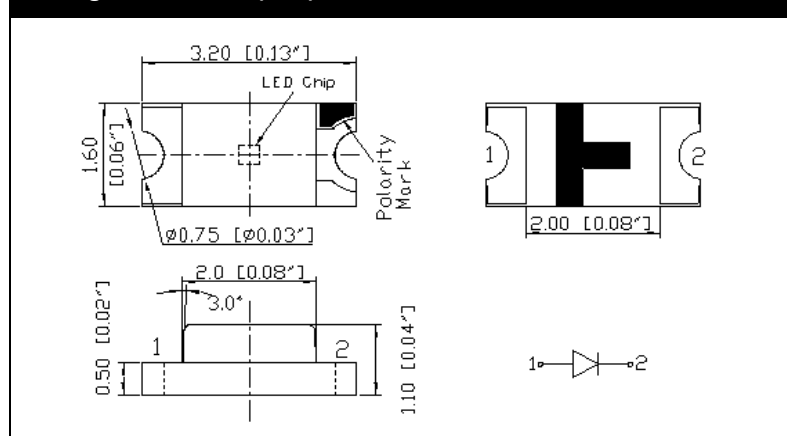
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOW11S16	Sky White	5600-46500K	140	440	3.2	20	30

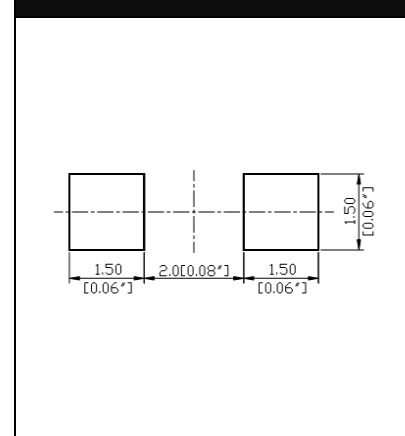
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR11S15	Red	625-635nm	140	110	2.1	20	30
NOR11S14	Red	615-630nm	140	170	2	20	30
NOA24S29	Amber	600-610nm	140	130	2.1	20	30
NOY11S17	Yellow	585-595nm	140	150	2	20	30
NOG11S09	Green	565-576nm	140	45	2.2	20	30
NOG17S90	Green	565-576nm	140	60	2.1	20	30
NOG11S10	Green	520-530nm	140	500	3.2	20	30
NOB17S89	Blue	465-475nm	140	120	3.1	20	30
NOB11S08	Blue	455-465nm	140	55	3.2	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PCB / CHIP LED

1206 (3216) Dual Colours



Features:

- Low Power LED
- Top View
- Dual Colours
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

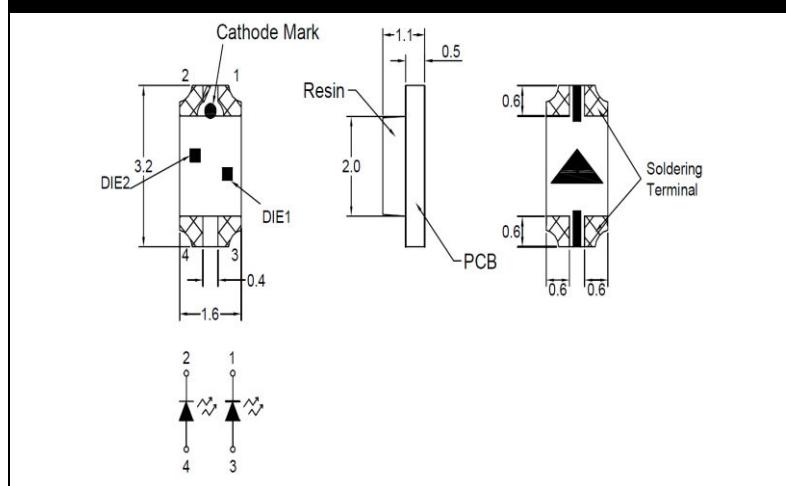
Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Light Strip

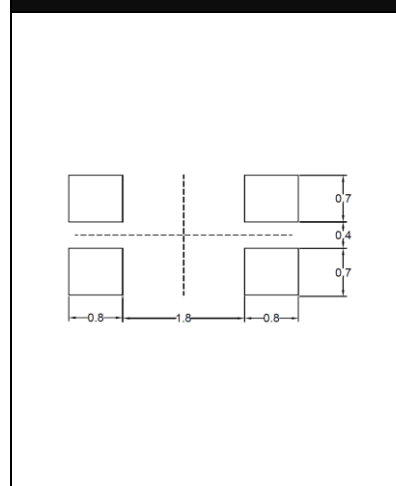
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K) / WL (nm)	$2\theta_{1/2}$ (°)	I_v (mcd)	V_F (V)	I_F (mA)
N0D25S68	Sky White/Amber 	8100K/605nm	140	850/210	3.2/2.1	20/20
N0D25S70	Red/Green 	630/574nm	140	80/32	1.9/2.0	20/20
N0D25S69	Red/Blue 	630/470nm	140	60/80	1.9/3.2	20/20

Package Dimensions (mm)



Recommended Solder Pattern



PCB / CHIP LED

1209 (3224)



Features:

- Low Power LED
- Top View
- Narrow Viewing Angle
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Light Strip

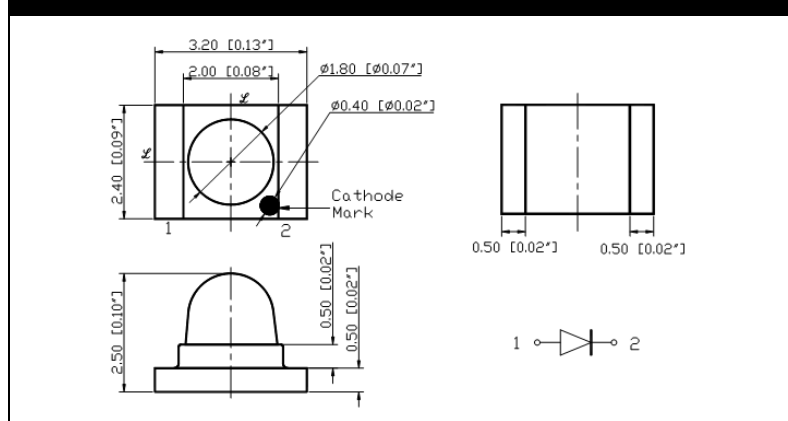
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOW10S62	Sky White	5600-46500K	130	140	3.1	20	30
NOW16S94	Sky White	5600-46500K	130	280	3.0	20	30

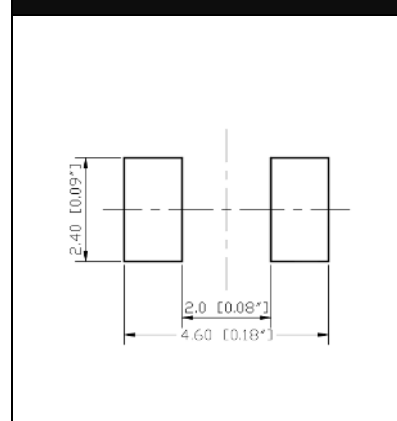
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR10S61	Red	625-635nm	15	1600	2.0	20	30
NOR10S60	Red	620-630nm	15	3850	2.0	20	30
NOA16S95	Amber	600-610nm	15	3350	2.0	20	30
NOY10S63	Yellow	585-595nm	15	3400	2.0	20	30
NOG10S56	Green	565-576nm	15	1000	2.0	20	30
NOG10S57	Green	520-530nm	15	8800	3.2	20	30
NOB10S55	Blue	460-470nm	15	1300	3.1	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PCB / CHIP LED

1209 (3224) Dual Colours / RGB



Features:

- Low Power LED
- Top View
- Narrow Viewing Angle
- Dual Colours / RGB
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

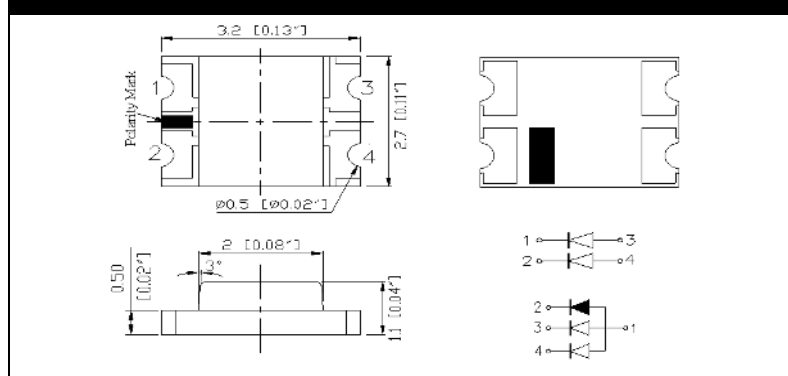
Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Light Strip

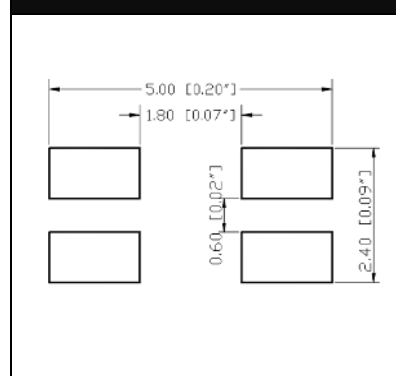
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0D11S90	Red/Green 	640/570nm	60	60/40	2.0/2.0	20/20

Package Dimensions (mm)



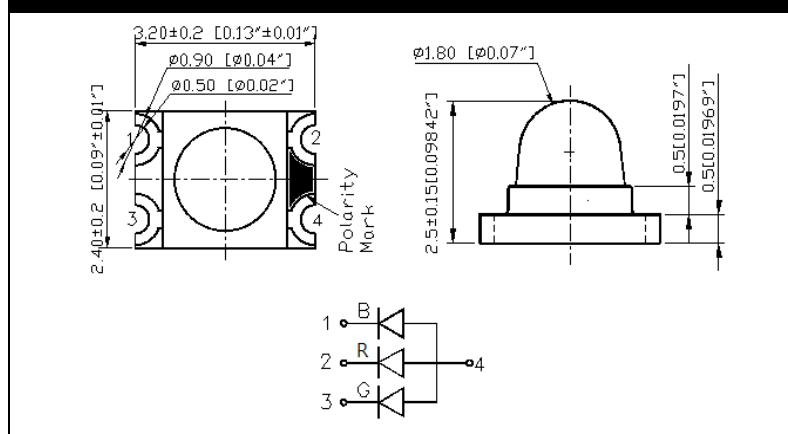
Recommended Solder Pattern



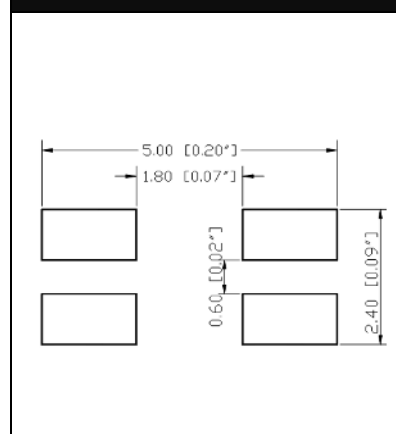
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0M11S91	Red/Green/Blue 	620/525/470nm	60	160/460/65	2.0/3.1/3.1	20/20/20

Package Dimensions (mm)



Recommended Solder Pattern



PCB / CHIP LED

1210 (3227) Dual Colours / RGB



Features:

- Low Power LED
- Top View
- Dual Colours / RGB
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Light Strip

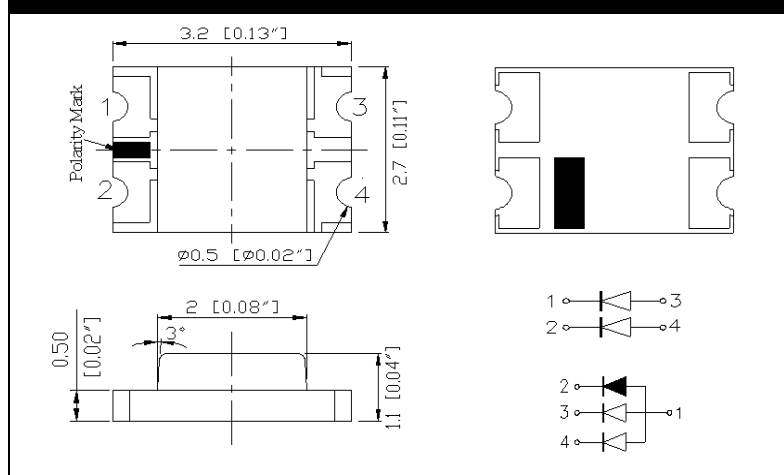
Colour Electrical & Optical Characteristics

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0D11S59	Red/Yellow	640/590nm	140	70/155	2.0/2.0	20/20
N0D11S61	Red/Green	630/520nm	140	105/550	2.0/3.1	20/20
N0D17S93	Red/Green	625/570nm	140	160/55	2.0/2.0	20/20
N0D11S60	Red/Green	620/525nm	140	160/430	2.0/3.1	20/20
N0D17S94	Red/Blue	630/470nm	140	110/95	2.0/3.3	20/20
N0D11S62	Red/Blue	625/470nm	140	80/90	2.0/3.1	20/20
N0D11S85	Yellow/Green	590/525nm	140	200/480	2.0/3.3	20/20
N0D11S86	Green/Blue	525/470nm	140	480/95	3.3/3.2	20/20

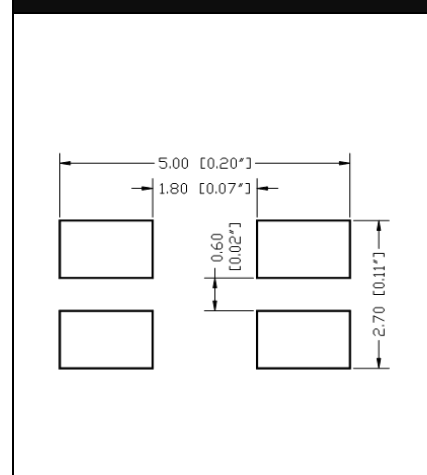
Colour Electrical & Optical Characteristics

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0M11S89	Red/Yellow/Green	620/590/570	140	140/140/35	2.0/2.0/2.0	20/20/20
N0M11S87	Red/Green/Blue	622/625/470	140	180/340/120	2.0/3.2/3.2	20/20/20
N0M11S88	Red/Green/Blue	620/625/470	140	160/470/90	2.0/3.1/3.1	20/20/20

Package Dimensions (mm)



Recommended Solder Pattern



EMC LED

2016 0.1W~0.4W



Features:

- Mid Power LED
- Top View
- EMC Package
- CRI 80 (White)
- Various CCT / Colour
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Backlight
- Decorative Lighting
- Indication Light
- 3C Product

0.2W Electrical & Optical Characteristics (typ. at 3.0V/60mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW20S31	Cool White	6020-7040K	110	25.5	3.0	60	80
NOW20S32	Cool White	5310-6020K	110	25.5	3.0	60	80
NOW20S33	Natural White	4745-5311K	110	25.5	3.0	60	80
NOW20S34	Natural White	3710-4260K	110	25.5	3.0	60	80
NOW20S35	Warm White	2870-3220K	110	24	3.0	60	80
NOW20S36	Warm White	2580-2870K	110	23	3.0	60	80

0.3W Electrical & Optical Characteristics (typ. at 9.5V/30mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW26S26	Cool White	6020-7040K	110	35	9.5	30	80
NOW26S25	Cool White	5310-6020K	110	35	9.5	30	80
NOW26S24	Natural White	4745-5311K	110	35	9.5	30	80
NOW26S23	Natural White	3710-4260K	110	35	9.5	30	80
NOW26S22	Warm White	2870-3220K	110	33	9.5	30	80
NOW26S21	Warm White	2580-2870K	110	32	9.5	30	80

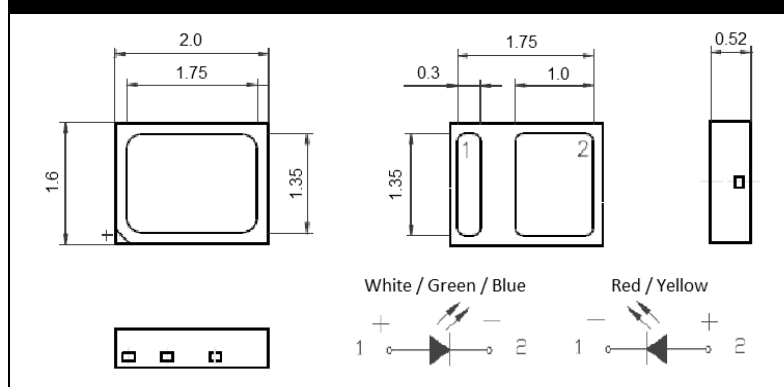
0.4W Electrical & Optical Characteristics (typ. at 6.1V/60mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW26S16	Cool White	6020-7040K	110	48	6.1	60	80
NOW26S15	Cool White	5310-6020K	110	48	6.1	60	80
NOW26S14	Natural White	4745-5311K	110	48	6.1	60	80
NOW26S13	Natural White	3710-4260K	110	48	6.1	60	80
NOW26S12	Warm White	2870-3220K	110	45	6.1	60	80
NOW26S11	Warm White	2580-2870K	110	43	6.1	60	80

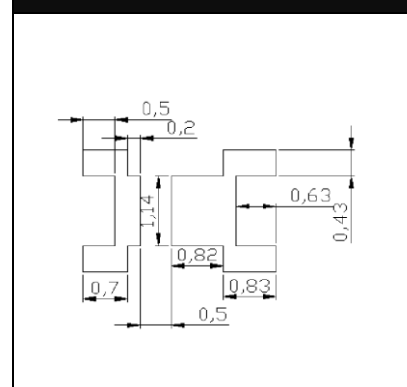
0.1W / 0.2W Colour Electrical & Optical Characteristics (typ. at 40/60mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR20S37	Red	620-630nm	120	5.5	2.3	40	60
NOY20S38	Yellow	585-595nm	120	4	2.3	40	60
NOG20S39	Green	520-530nm	120	13.4	3.1	60	80
NOB20S40	Blue	460-470nm	120	2.7	3.1	60	80

Package Dimensions (mm)



Recommended Solder Pattern



PLCC4 LED 2121 RGB



Features:

- Low Power LED
- Top View
- Black Package
- Excellent White Balance
- Compatible Package
- High Efficiency
- High Lumen Output

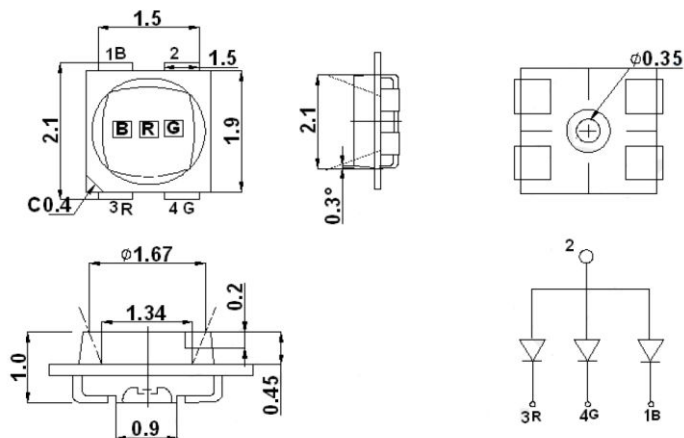
Applications:

- HD Display
- Commercial Lighting
- Decorative Lighting
- Indication Light
- 3C Product

Colour Electrical & Optical Characteristics

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I _V (mcd)	V _F (V)	I _F (mA)
NOM11S40BF	Red/Green/Blue 	625/525/470	120	150/430/100	1.9/3.2/3.2	20/20/20

Package Dimensions (mm)



Recommended Solder Pattern



PLCC2 LED

2835 0.2W / 0.5W



Features:

- Mid Power LED
- Top View
- High CRI 80 / 90
- Large Emitting Area
- High C/P Ratio
- High Efficiency
- High Lumen Output
- Compatible Package

Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Decorative Lighting
- Portable Torch
- Architectural Lighting

0.2W CRI 80 Electrical & Optical Characteristics (typ. at 60mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW15S86	Cool White	5710-6530K	120	26	3.2	60	80
NOW15S88	Warm White	2725-3045K	120	26	3.1	60	80
NOW15S87	Natural White	3710-4260K	120	26	3.2	60	80

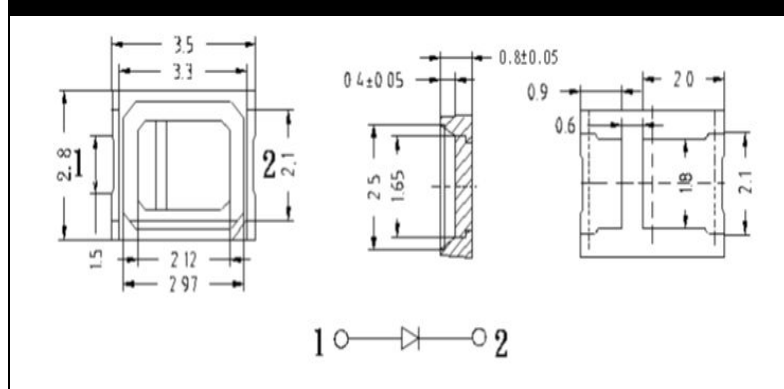
0.2W CRI 90 Electrical & Optical Characteristics (typ. at 60mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW15S68	Cool White	5710-6530K	120	20	3.2	60	90
NOW17S07	Natural White	3710-4260K	120	18	3.2	60	90
NOW17S06	Warm White	2725-3045K	120	19	3.1	60	90

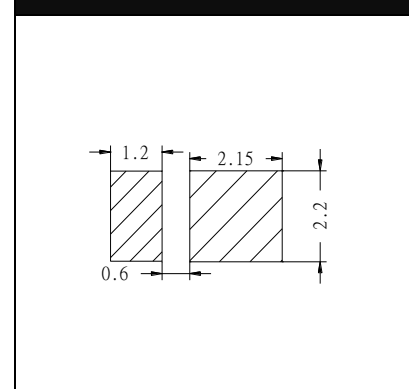
0.5W Electrical & Optical Characteristics (typ. at 150mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW04S10	Cool White	5710-6530K	120	61	3.2	150	70
NOW01S74	Cool White	5710-6530K	120	56	3.2	150	80
NOW00S93	Natural White	3710-4260K	120	53	3.2	150	80
NOW00S71	Warm White	2715-3000K	120	47	3.2	150	80

Package Dimensions (mm)



Recommended Solder Pattern



PLCC2 LED

2835 0.2~1W Colour



Features:

- Mid/High Power LED
- Top View
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

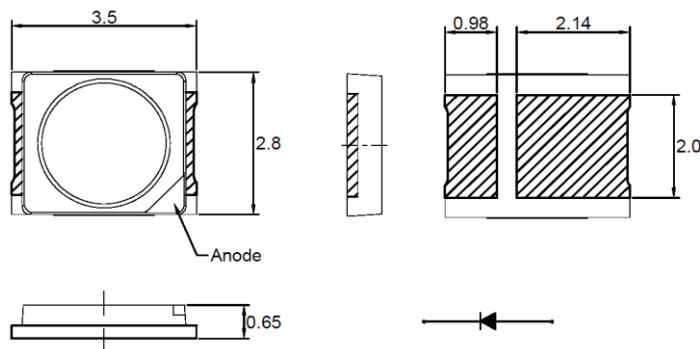
Applications:

- Commercial Lighting
- Decorative Lighting
- Information Board
- Light Strip

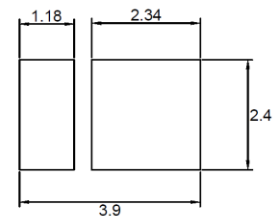
0.1W / 0.2W Colour Electrical & Optical Characteristics (typ. at 40/60mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR15S52	Red	620-630nm	120	36	2.4	350	360
NOY15S53	Yellow	585-595nm	120	18	2.4	150	160
NOY15S54	Yellow	585-595nm	120	36	2.4	350	360
NOG16S14	Green	519-531nm	120	24	3.2	150	160
NOB15S55	Blue	447-459nm	120	2.2	3.2	60	70
NOB16S13	Blue	447-459nm	120	5	3.2	150	160

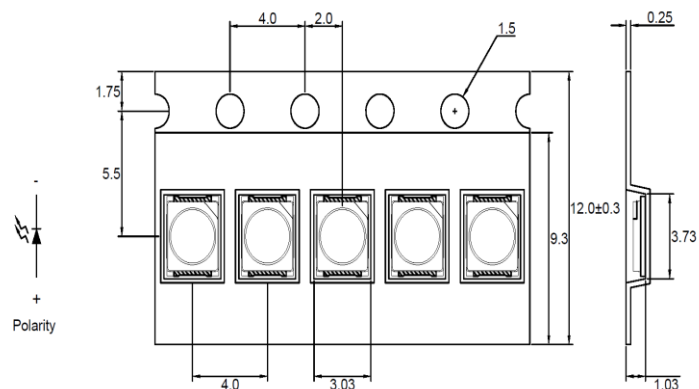
Package Dimensions (mm)



Recommended Solder Pattern



Packing Dimensions



3014 0.2W / 0.5W



Features:

- Mid Power LED
- Top View
- EMC Package
- CRI 80
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Backlight
- Decorative Lighting

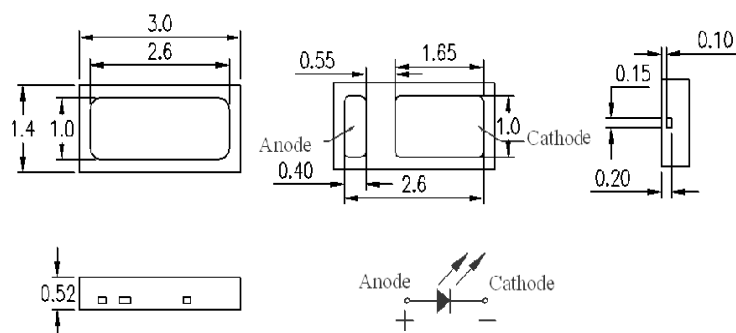
0.2W Electrical & Optical Characteristics (typ. at 2.85V/60mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
N0W20S21	Cool White	6020-7040K	110	28.5	2.85	60	80
N0W20S22	Cool White	5310-6020K	110	28.5	2.85	60	80
N0W20S23	Natural White	4745-5311K	110	28.5	2.85	60	80
N0W20S24	Natural White	3710-4260K	110	28.5	2.85	60	80
N0W20S25	Warm White	2870-3220K	110	27	2.85	60	80
N0W20S26	Warm White	2580-2870K	110	26	2.85	60	80

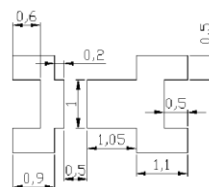
0.5W Electrical & Optical Characteristics (typ. at 3.1V/150mA)

Order Code	Colour	CCT (K)	2θ _{1/2} (°)	Φ _V (lm)	V _F (V)	I _F (mA)	CRI
N0W20S41	Cool White	6020-7040K	110	62	3.1	150	80
N0W20S42	Cool White	5310-6020K	110	62	3.1	150	80
N0W20S43	Natural White	4745-5311K	110	62	3.1	150	80
N0W20S44	Natural White	3710-4260K	110	62	3.1	150	80
N0W20S45	Warm White	2870-3220K	110	58	3.1	150	80
N0W20S46	Warm White	2580-2870K	110	54	3.1	150	80

Package Dimensions (mm)

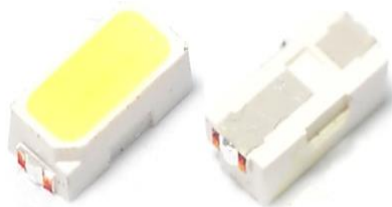


Recommended Solder Pattern



PLCC2 LED

3014 0.06~0.2W



Features:

- Mid Power LED
- Top View
- Various CCT
- CRI 80
- High Efficiency
- High Lumen Output
- Compatible Package

Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Decorative Lighting
- Office Lighting
- Portable Torch
- Architectural Lighting

0.06W Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW24S90	Cool White	6020-7040K	120	6.5lm	3.2	20	80
NOW24S91	Cool White	5310-6020K	120	6.5lm	3.2	20	80
NOW24S92	Cool White	4745-5310K	120	6.5lm	3.2	20	80
NOW24S93	Natural White	4260-4745K	120	6.5lm	3.2	20	80
NOW24S94	Natural White	3710-4260K	120	6.5lm	3.2	20	80
NOW24S95	Warm White	3220-3710K	120	6lm	3.2	20	80
NOW24S96	Warm White	2870-3220K	120	6lm	3.2	20	80
NOW24S97	Warm White	2580-2870K	120	6lm	3.2	20	80

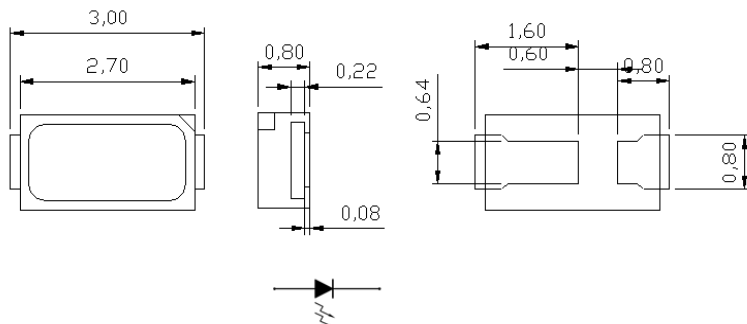
0.1W Electrical & Optical Characteristics (typ. at 30mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW24S80	Cool White	6175-6825K	120	14	3.2	30	80
NOW24S81	Cool White	6020-6530K	120	14	3.2	30	80
NOW24S82	Cool White	5477-6020K	120	14	3.2	30	80
NOW24S83	Natural White	4900-5300K	120	14	3.2	30	80
NOW24S84	Natural White	3897-4223K	120	14	3.2	30	80
NOW24S85	Warm White	3265-3535K	120	13	3.2	30	80
NOW24S86	Warm White	2855-3025K	120	13	3.2	30	80
NOW24S87	Warm White	2645-2805K	120	11	3.2	30	80

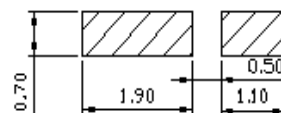
0.2W Electrical & Optical Characteristics (typ. at 150mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW25S00	Cool White	6020-7040K	120	26	3.2	60	80
NOW25S01	Cool White	5310-6020K	120	26	3.2	60	80
NOW25S02	Cool White	4745-5310K	120	26	3.2	60	80
NOW25S03	Natural White	4260-4745K	120	26	3.2	60	80
NOW25S04	Natural White	3710-4260K	120	26	3.2	60	80
NOW25S05	Warm White	3220-3710K	120	24	3.2	60	80
NOW25S06	Warm White	2870-3220K	120	24	3.2	60	80
NOW25S07	Warm White	2580-2870K	120	24	3.2	60	80

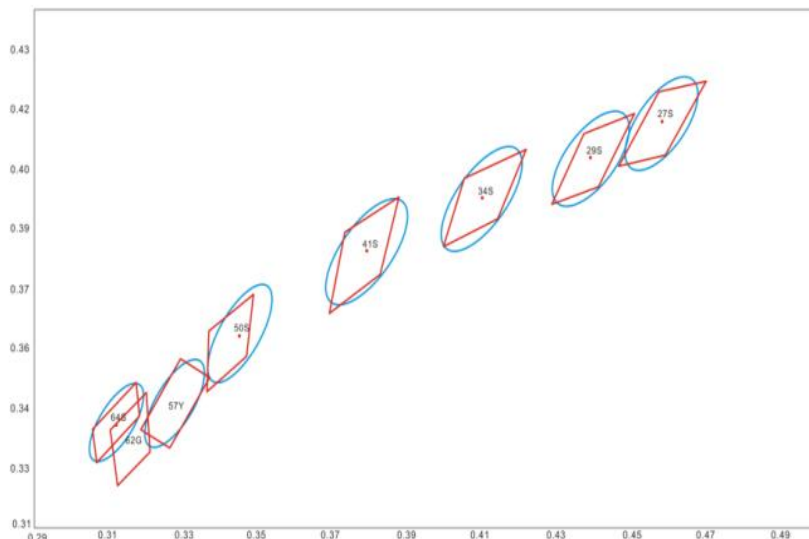
Package Dimensions (mm)



Recommended Solder Pattern



CIE Chromaticity Diagram (0.1W ONLY)

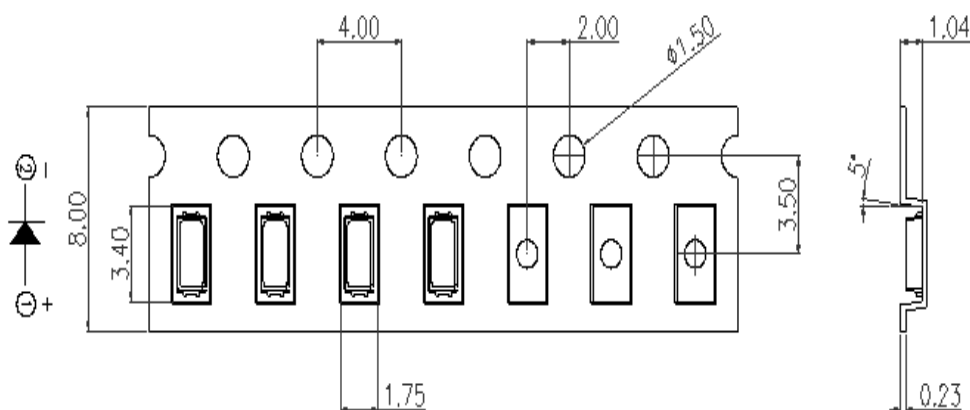


Standard MacAdam Ellipse:

6175-6825K - 5 STEP
6020-6530K - 5 STEP
5477-6020K - 5 STEP
4900-5300K - 5 STEP
3897-4223K - 5 STEP
3265-3535K - 5 STEP
2855-3025K - 5 STEP
2645-2805K - 5 STEP

2~4 STEP may be available, please contact for details.

Packing Dimensions



PLCC2 LED

3020 0.06W



Features:

- Mid Power LED
- Top View
- EMC Package
- CRI 80
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Backlight
- Decorative Lighting

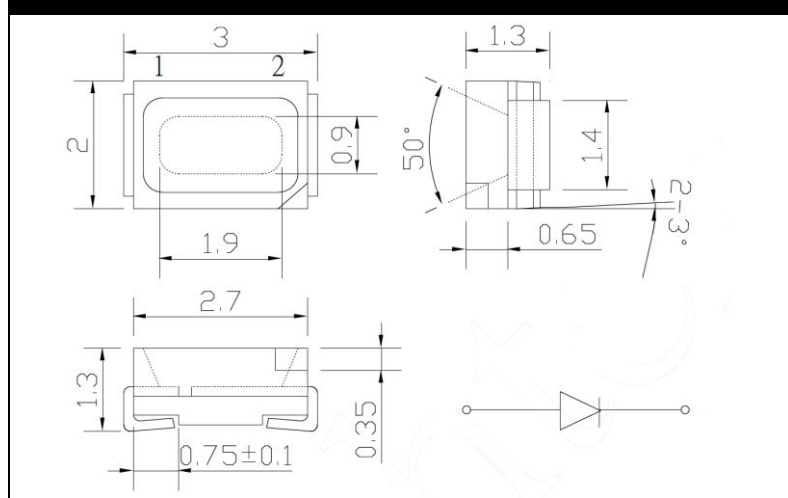
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOW03S26	Sky White	39000-242100K	120	700	3	10	30
NOW03S43	Cool White	6000-8400K	120	460	3.1	5	30
NOW03S42	Cool White	5450-6650K	120	2650	3.2	20	30
NOW03S45	Warm White	2760-3160K	120	2150	3.3	20	30

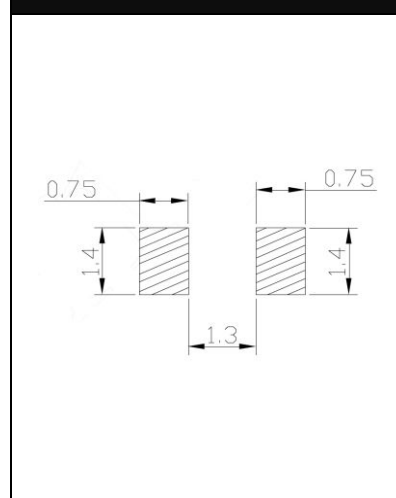
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR23S17	Red	620-630nm	120	240	2.0	20	30
NOR03S38	Red	620-630nm	120	680	2.1	20	30
NOR05S66	Red	615-630nm	120	700	2.1	20	30
NOY05S70	Yellow	585-597nm	120	210	2.0	20	30
NOY03S28	Yellow	585-594nm	120	800	2.0	20	30
NOG03S08	Green	564-577nm	120	120	2.1	20	30
NOG05S65	Green	520-535nm	120	1300	3.2	20	30
NOB03S35	Blue	462-473nm	120	350	3.2	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PLCC2 LED

3020 0.2W / 0.5W



Features:

- Mid Power LED
- Top View
- CRI 70 / 80
- Various CCT
- High Efficiency
- High Lumen Output
- Compatible Package

Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Decorative Lighting
- Portable Torch
- Architectural Lighting
- Light Strip

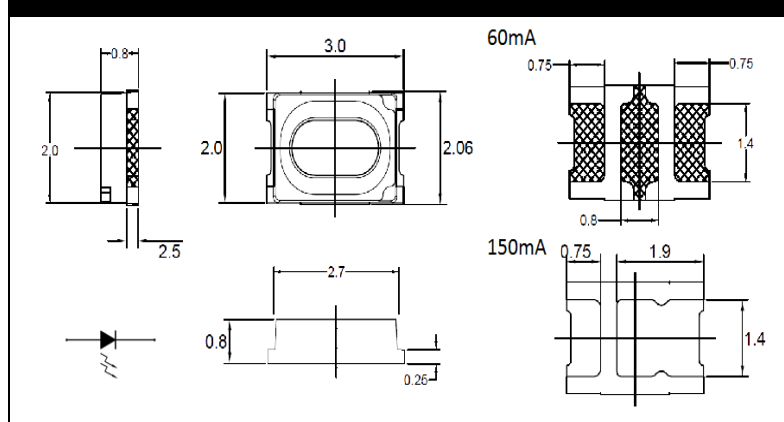
0.2W Electrical & Optical Characteristics (typ. at 3.2V/60mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW02S30	Cool White	5300-6020K	120	23	3.2	60	70
NOW02S31	Cool White	5300-6020K	120	22	3.2	60	80
NOW02S33	Natural White	3000-4260K	120	23	3.2	60	70
NOW02S34	Natural White	3160-4260K	120	22	3.2	60	80
NOW02S35	Warm White	2725-3220K	120	22	3.2	60	70
NOW02S36	Warm White	2725-3220K	120	21	3.2	60	80

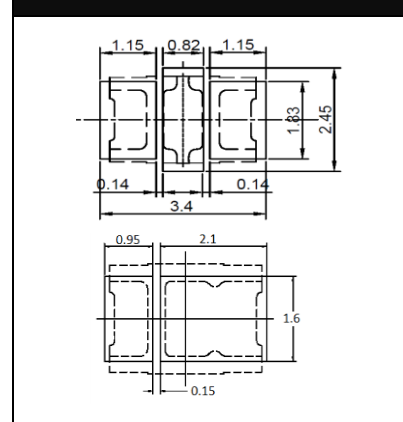
0.5W Electrical & Optical Characteristics (typ. at 3.2V/150mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW02S20	Cool White	5300-6020K	120	65	3.2	150	70
NOW02S21	Cool White	5300-6020K	120	60	3.2	150	80
NOW02S22	Natural White	3000-4260K	120	65	3.2	150	70
NOW02S23	Natural White	3000-4260K	120	60	3.2	150	80
NOW02S24	Warm White	2725-3220K	120	60	3.2	150	70
NOW02S25	Warm White	2725-3220K	120	55	3.2	150	80

Package Dimensions (mm)



Recommended Solder Pattern



PLCC2 LED

3020 0.2~0.5W Colour



Features:

- Mid Power LED
- Top View
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Decorative Lighting
- Light Strip

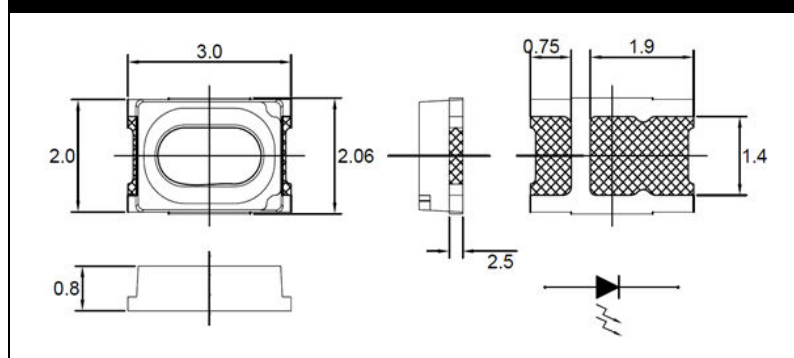
0.2W Colour Electrical & Optical Characteristics (typ. at 60mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR07S02	Red	620-634nm	120	2000	2.1	60	70
NOA07S01	Amber	620-630nm	120	5000	2.2	60	70
NOY07S03	Yellow	585-598nm	120	2550	2.1	60	70
NOY07S04	Yellow	585-598nm	120	5000	2.2	60	70

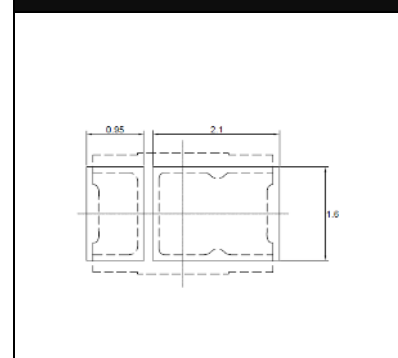
0.5W Colour Electrical & Optical Characteristics (typ. at 150mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR07S07	Red	620-631nm	120	6500	2.5	150	160
NOY07S08	Yellow	585-598nm	120	5000	2.5	150	160
NOG07S06	Green	520-531nm	120	10000	3.3	150	160
NOB07S05	Blue	447-459nm	120	2550	3.3	150	160

Package Dimensions (mm)

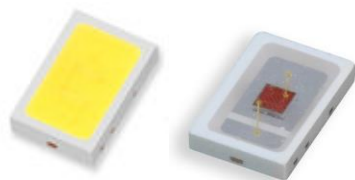


Recommended Solder Pattern



EMC LED

3020 0.5W~1W



Features:

- Mid Power LED
- Top View
- EMC Package
- CRI 80 (White)
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Backlight
- Decorative Lighting

0.5W Electrical & Optical Characteristics (typ. at 3.1V/150mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW20S61	Cool White	6020-7040K	110	70	3.1	150	80
NOW20S62	Cool White	5310-6020K	110	70	3.1	150	80
NOW20S63	Natural White	4745-5311K	110	70	3.1	150	80
NOW20S64	Natural White	3710-4260K	110	70	3.1	150	80
NOW20S65	Warm White	2870-3220K	110	66	3.1	150	80
NOW20S66	Warm White	2580-2870K	110	62	3.1	150	80

0.5W Electrical & Optical Characteristics (typ. at 6.2V/80mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW20S51	Cool White	6020-7040K	110	66	6.2	80	80
NOW20S52	Cool White	5310-6020K	110	66	6.2	80	80
NOW20S53	Natural White	4745-5311K	110	66	6.2	80	80
NOW20S54	Natural White	3710-4260K	110	66	6.2	80	80
NOW20S55	Warm White	2870-3220K	110	62	6.2	80	80
NOW20S56	Warm White	2580-2870K	110	62	6.2	80	80

0.5W Electrical & Optical Characteristics (typ. at 19.0V/30mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW20S71	Cool White	6020-7040K	110	70	19.0	30	80
NOW20S72	Cool White	5310-6020K	110	70	19.0	30	80
NOW20S73	Natural White	4745-5311K	110	70	19.0	30	80
NOW20S74	Natural White	3710-4260K	110	70	19.0	30	80
NOW20S75	Warm White	2870-3220K	110	66	19.0	30	80
NOW20S76	Warm White	2580-2870K	110	62	19.0	30	80

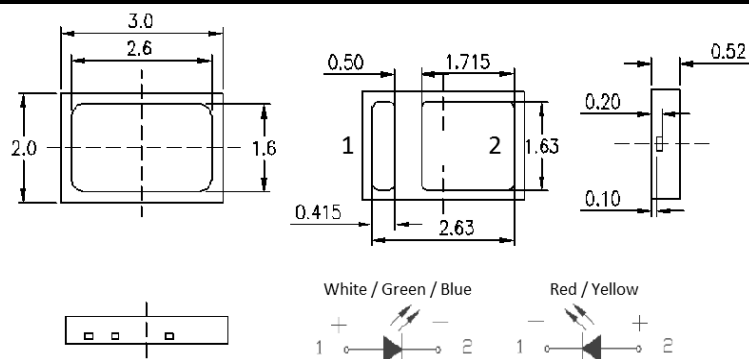
0.5W Colour Electrical & Optical Characteristics (typ. at 150mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR20S57	Red	620-630nm	150	17	2.2	150	200
NOY20S58	Yellow	585-600nm	150	17	2.2	150	200
NOG20S59	Green	520-535nm	150	38	3.0	150	200
NOB20S60	Blue	455-470nm	150	10	3.1	150	200

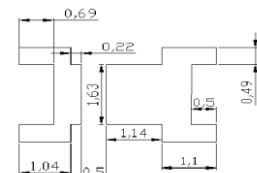
1W Electrical & Optical Characteristics (typ. at 9.6V/100mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW26S06	Cool White	6020-7040K	110	113	9.6	100	80
NOW26S05	Cool White	5310-6020K	110	113	9.6	100	80
NOW26S04	Natural White	4745-5311K	110	113	9.6	100	80
NOW26S03	Natural White	3710-4260K	110	113	9.6	100	80
NOW26S02	Warm White	2870-3220K	110	107	9.6	100	80
NOW26S01	Warm White	2580-2870K	110	102	9.6	100	80

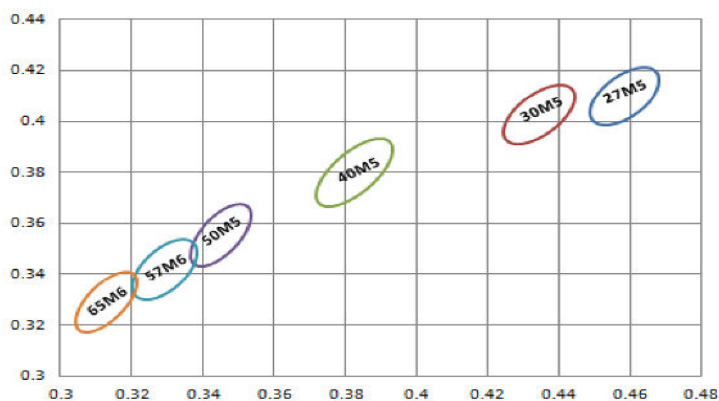
Package Dimensions (mm)



Recommended Solder Pattern



CIE Chromaticity Diagram



Standard MacAdam Ellipse:

6020-7040K - 6 STEP
 5310-6020K - 6 STEP
 4745-5311K - 5 STEP
 3710-4260K - 5 STEP
 2870-3220K - 5 STEP
 2580-2870K - 5 STEP

2~4 STEP may be available, please contact for details.

PLCC2 LED

3528 1.0t



Features:

- Lower Power LED
- Low Height
- Top View
- Various CCT
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

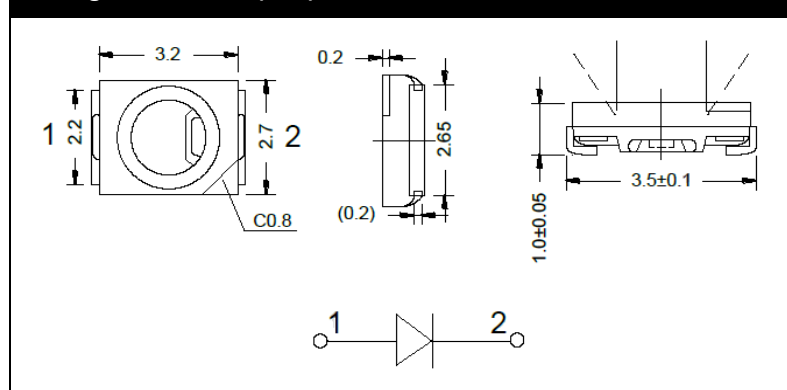
Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Decorative Lighting
- Portable Torch
- Architectural Lighting
- Light Bulb

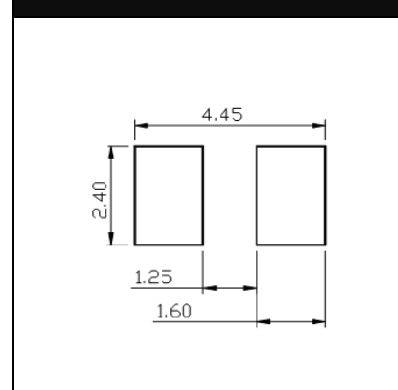
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_v (lm)	I_v (mcd)	V_f (V)	I_f (mA)	CRI
N0W13S35	Sky White	8400-16000K	120	7.8	2500	3.2	20	70
N0W19S34	Cool White	6000-7400K	120	7.8	2500	3.1	20	85
N0W03S47	Natural White	4600-5450K	120	7.4	2350	3.1	20	85
N0W19S36	Natural White	4240-4600K	120	7.2	2300	3.1	20	85
N0W13S42	Natural White	3920-4240K	120	5.8	1850	3.3	20	85
N0W13S43	Warm White	3400-3640K	120	7.0	2250	3.1	20	85
N0W19S35	Warm White	3400-3640K	120	6.5	2080	3.0	20	90
N0W13S48	Warm White	2960-3160K	120	7.0	2250	3.1	20	85
N0W19S37	Warm White	2760-3160K	120	7.7	2450	3.3	20	80
N0W13S44	Warm White	2580-2760K	120	6.6	2100	3.1	20	85
N0W13S50	Warm White	2230-2400K	120	5.8	1850	3.1	20	85

Package Dimensions (mm)



Recommended Solder Pattern



PLCC2 LED

3528 1.9t



Features:

- Lower Power LED
- Top View
- Various CCT
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

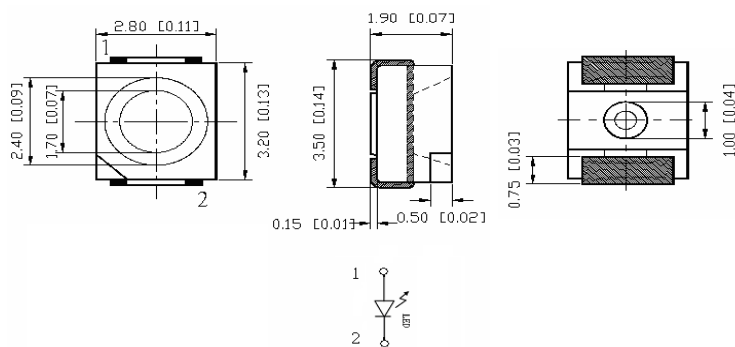
Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Decorative Lighting
- Portable Torch
- Architectural Lighting

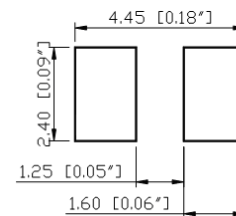
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	I_V (mcd)	V_F (V)	I_F (mA)	CRI
NOW13S32	Sky White	8400-25000K	120	5.8	1850	3.2	20	---
NOW03S34	Cool White	5450-7400K	120	7.0	2250	3.2	20	CRI 70
NOW13S26	Natural White	4200-4700K	120	7.2	2300	3.2	20	CRI 70
NOW03S77	Warm White	2760-3160K	120	5.8	1850	3.2	20	CRI 80
NOW03S07	Warm White	2400-2760K	120	6.0	2050	3.2	20	CRI 70
NOW13S31	Warm White	2100-2230K	120	5.8	1850	3.2	20	---

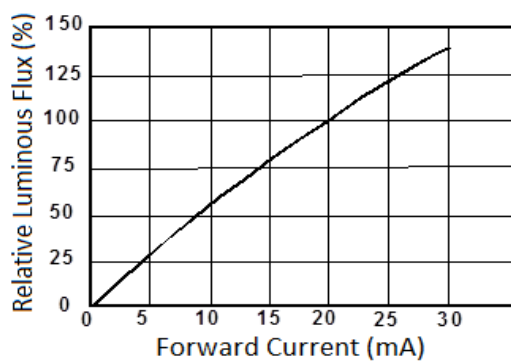
Package Dimensions (mm)



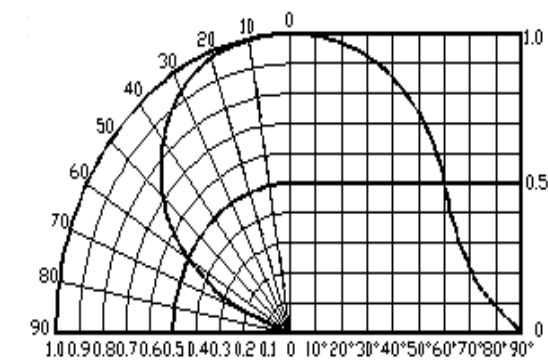
Recommended Solder Pattern



Relative Luminous Flux v.s. Forward Current



Viewing Angle



PLCC2 LED

3528 1.9t Colour



Features:

- Low Power LED
- Top View
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

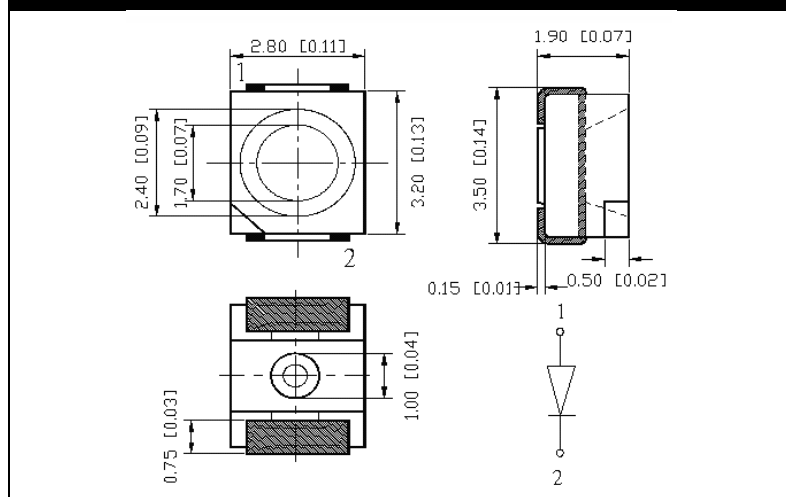
Applications:

- Commercial Lighting
- Decorative Lighting
- Light Strip
- Information Board
- LED Display

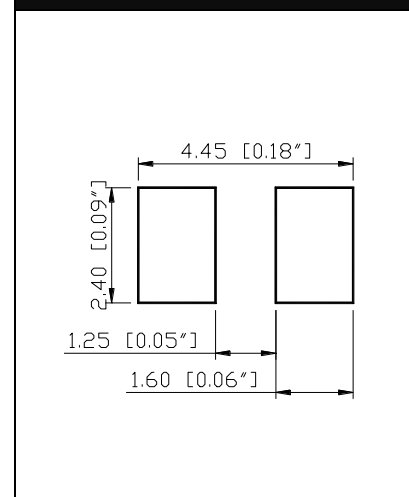
Colour Electrical & Optical Characteristics

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR13S11	Red	650-670nm	120	210	1.9	20	30
NOR03S55	Red	620-630nm	120	210	2.0	20	30
NOR01S90	Red	620-630nm	120	550	1.9	20	50
NOR02S73	Red	620-630nm	120	780	1.9	20	30
NOA02S50	Amber	602-609nm	120	270	1.9	20	50
NOA13S13	Amber	600-612nm	120	780	1.9	20	30
NOY03S59	Yellow	585-597nm	120	210	2.0	20	30
NOY05S78	Yellow	585-594nm	120	800	1.9	20	30
NOG05S74	Green	567-577nm	120	90	1.9	20	30
NOG00S69	Green	520-535nm	120	1000	3.2	20	30
NOG01S89	Green	520-535nm	120	1700	3.2	20	30
NOB03S53	Blue	467-478nm	120	350	3.2	20	30
NOB01S91	Blue	462-473nm	120	350	3.2	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PLCC4 LED

3528 1.9t Colour / RGB



Features:

- Mid Power LED
- Top View
- Various Colour
- Dual Colours / RGB
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Decorative Lighting
- Information Board
- LED Display
- Light Strip

White Electrical & Optical Characteristics (typ. at 50mA) White Package

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	I_V (mcd)	V_F (V)	I_F (mA)
NOW19S78	Cool White	4700-7050K	120	17.9	5700	3.2	50

Colour Electrical & Optical Characteristics (typ. at 50mA) White Package

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR19S77	Red	630-650nm	120	170	2.1	50	55
NOR19S75	Red	615-630nm	120	2050	2.1	50	55
NOA19S72	Amber	600-610nm	120	2400	2.7	50	55
NOY19S79	Yellow	585-595nm	120	1600	2.1	50	55
NOG19S74	Green	515-525nm	120	1550	3.6	50	55
NOB19S73	Blue	465-475nm	120	585	3.4	50	55

Dual Colours Electrical & Optical Characteristics White Package

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
NOD01S73	Red/Green	625/570	120	210/90	1.9/2.1	20/20
NOD03S62	Red/Green	627/527	120	450/900	1.9/3.2	20/20
NOD17S32	Red/Blue	625/470	120	210/270	1.9/3.2	20/20
NOD18S09	Red/Yellow	620/590	120	220/200	2.0/2.0	20/20
NOD18S08	Amber/Green	605/570	120	240/100	2.0/2.0	20/20

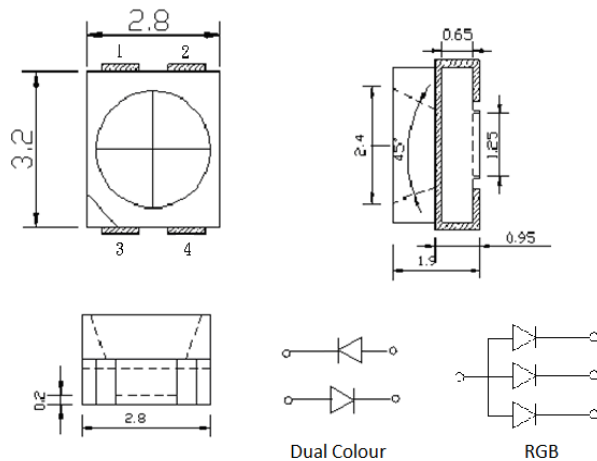
RGB Electrical & Optical Characteristics White Package

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
NOM18S11	Red/Green/Blue	620/525/470	120	230/970/150	2.0/3.1/3.1	20/20/20

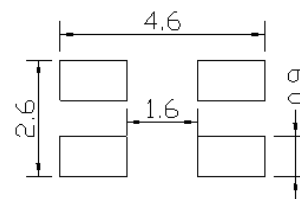
RGB Electrical & Optical Characteristics Black Surface Package

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
NOM03S72BS	Red/Green/Blue	622/527/467	120	235/1000/235	2.1/3.2/3.2	20/20/20

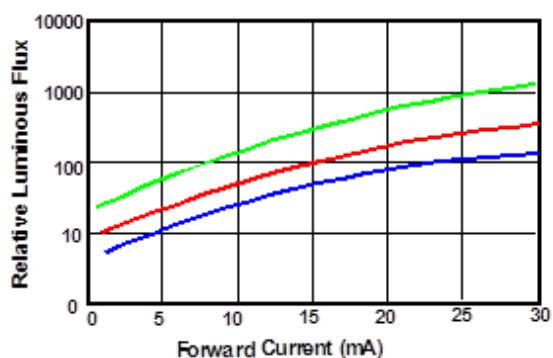
Package Dimensions (mm)



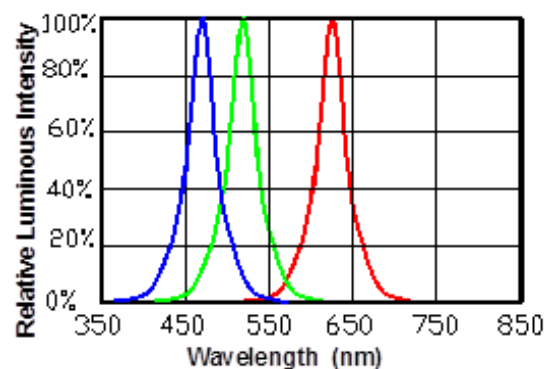
Recommended Solder Pattern



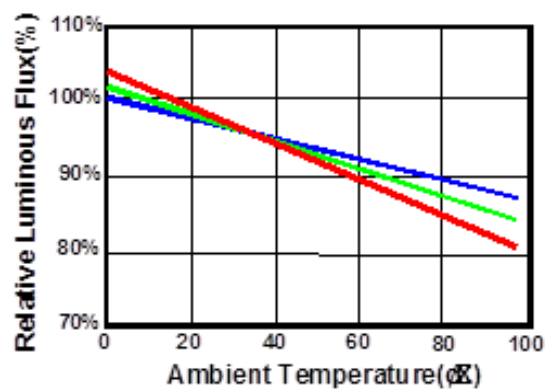
Relative Luminous Flux v.s. Forward Current



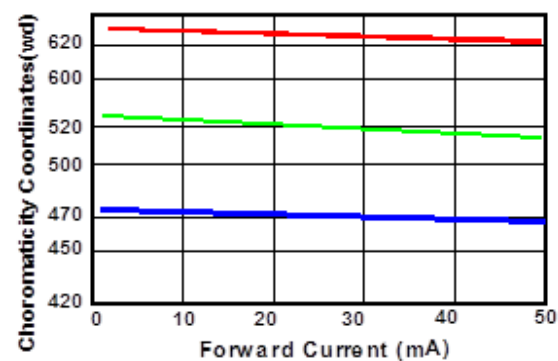
Relative Spectral Distribution



Relative Luminous Flux v.s. Ambient Temperature

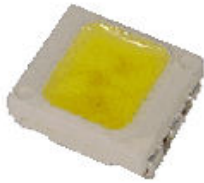


Wavelength v.s. Forward Current



PLCC6 LED

3528 0.3W



Features:

- Mid Power LED
- Top View
- Various Colours
- Multi-Chip Package
- High Efficiency
- Compatible Package
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Decorative Lighting
- Light Strip

Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_v (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W25S21	Cool White	5600-15000K	120	4500	3.3	100	105
N0W25S18	Cool White	5000-7000K	120	4000	3.3	100	105
N0W25S17	Natural White	4000-5000K	120	4000	3.3	100	105
N0W25S16	Warm White	3000-4000K	120	4000	3.3	100	105
N0W25S15	Warm White	2500-3000K	120	4000	3.3	100	105

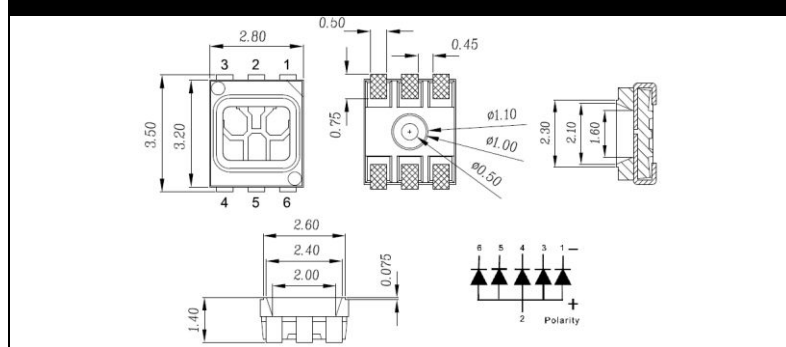
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_v (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R25S19	Red	615-630nm	120	1400	2.2	100	105
N0R25S20	Red	615-630nm	120	1700	2.2	100	105
N0Y25S22	Yellow	580-600nm	120	1250	2.2	100	105
N0G25S23	Green	500-530nm	120	4500	3.3	100	105

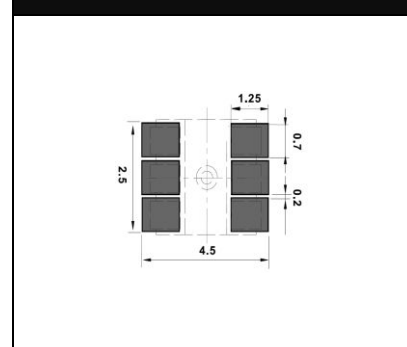
Colour Electrical & Optical Characteristics

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_v (mcd)	V_F (V)	I_F (mA)
N0M25S12	IR/IR/R/G/B	940/850/625/525/440	120	750/900/350/650/230	1/1/2/3/3	20*5
N0M25S13	IR/IR/R/G/B	940/850/630/520/430	120	5/7/13/10/21	1/1/2/3/3	20*5
N0M25S14	IR/IR/R/G/B	940/850/630/520/430	120	5/7/13/7/16	1/1/2/3/3	20*5

Package Dimensions (mm)



Recommended Solder Pattern



PLCC2 LED

3528+Lens White Package



Features:

- Top View
- Narrow Viewing Angle
- Epoxy Lens
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Indoor Lighting
- Traffic Signs
- Information Board
- Indication Lamps

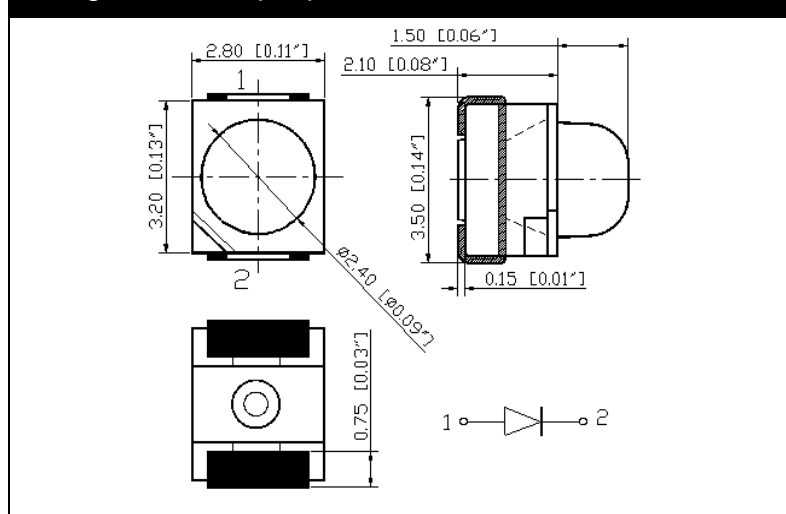
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W09S06	Sky White	5600-46500K	30	2600	3.3	20	30

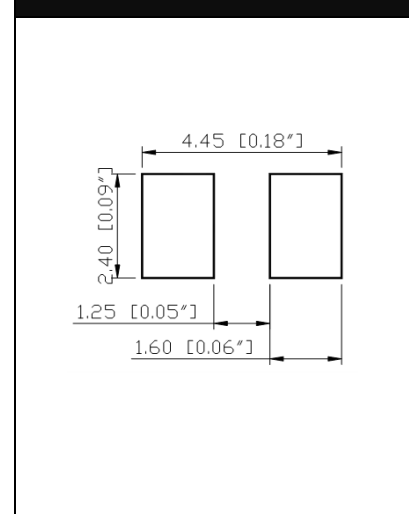
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R17S18	Red	625-635nm	30	7000	2.0	20	30
N0R09S05	Red	625-635nm	30	980	2.0	20	30
N0R09S04	Red	620-630nm	30	3500	2.0	20	30
N0Y18S43	Yellow	585-595nm	30	5600	2.0	20	30
N0Y18S99	Yellow	585-590nm	30	5600	2.0	20	30
N0Y09S07	Yellow	565-595nm	30	1300	2.0	20	30
N0G09S02	Green	565-576nm	30	400	2.0	20	30
N0G09S03	Green	520-530nm	30	4200	3.3	20	30
N0G18S44	Green	500-510nm	30	3400	3.3	20	30
N0B09S01	Blue	462-475nm	30	900	3.3	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PLCC2 LED

3528+Lens Black Surface / Package



Features:

- Top View
- Narrow Viewing Angle
- Epoxy Lens
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Indoor Lighting
- Traffic Signs
- Information Board
- Indication Lamps

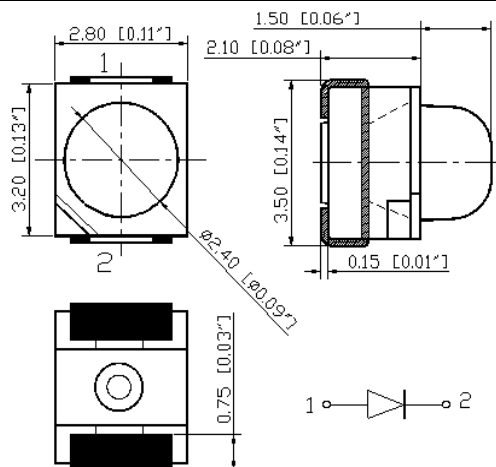
Colour Electrical & Optical Characteristics (typ. at 20mA) Black Surface Package

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR18S24BS	Red	620-630nm	30	3200	2.0	20	30
NOR18S25BS	Red	615-630nm	30	11000	2.8	50	55
NOA18S20BS	Amber	600-610nm	30	22000	2.8	50	55
NOY15S58BS	Yellow	585-595nm	30	1300	2.0	20	30
NOY15S67BS	Yellow	585-595nm	30	1700	2.0	20	30
NOY18S26BS	Yellow	585-595nm	30	13000	2.8	50	55
NOG18S23BS	Green	520-530nm	30	14400	3.4	50	55
NOG18S22BS	Green	500-510nm	30	2800	3.5	50	55
NOB18S21BS	Blue	460-470nm	30	2100	3.5	50	55

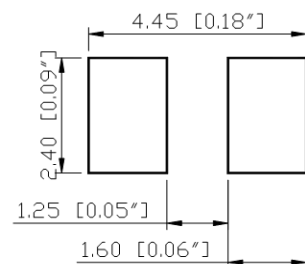
Colour Electrical & Optical Characteristics (typ. at 20mA) Black Body Package

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR10S38BF	Red	620-630nm	30	9000	2.0	50	55
NOY18S27BF	Yellow	585-595nm	30	3600	2.0	20	30
NOG18S45BF	Green	520-530nm	30	11500	3.2	20	30
NOB18S27BF	Blue	460-470nm	30	1900	3.3	30	35

Package Dimensions (mm)



Recommended Solder Pattern



PLCC4 LED

3528+Lens



Features:

- Top View
- Narrow Viewing Angle
- Epoxy Lens
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Indoor Lighting
- Traffic Signs
- Information Board
- Indication Lamps

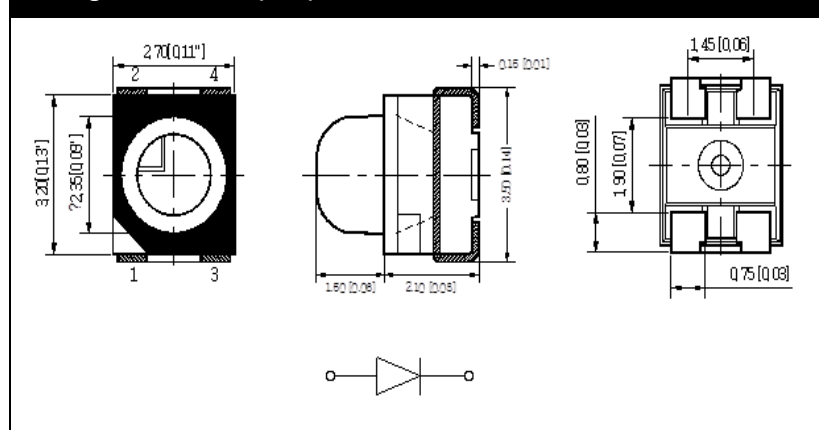
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR25S57	Red	630-650nm	30	75	2.0	20	30
NOR08S50	Red	625-635nm	30	980	2.0	20	30
NOR08S49	Red	620-630nm	30	3500	2.0	20	30
NOR08S44	Red	620-630nm	30	8000	2.5	50	70
NOA09S53	Amber	615-630nm	30	1400	2.0	20	30
NOY08S45	Yellow	588-595nm	30	6500	2.0	50	70
NOY08S52	Yellow	588-595nm	30	1600	2.0	20	30
NOY09S51	Yellow	585-595nm	30	3500	2.0	20	30
NOY09S52	Yellow	585-595nm	30	3800	2.0	20	30
NOG08S47	Green	565-576nm	30	400	2.0	20	30
NOG08S48	Green	520-530nm	30	4200	3.3	20	30
NOG08S46	Green	520-530nm	30	6200	3.5	30	30
NOB09S50	Blue	465-475nm	30	1200	3.2	20	30
NOB08S53	Blue	465-475nm	30	900	3.1	20	30

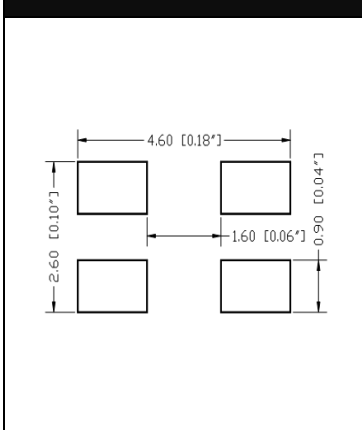
Colour Electrical & Optical Characteristics (typ. at 20mA) Black Surface Package

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOA19S90BS	Amber	600-610nm	30	22000	2.8	50	55

Package Dimensions (mm)



Recommended Solder Pattern



PLCC2 LED

3030 1W



Features:

- 1W High Power
- Top View
- CRI 80
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

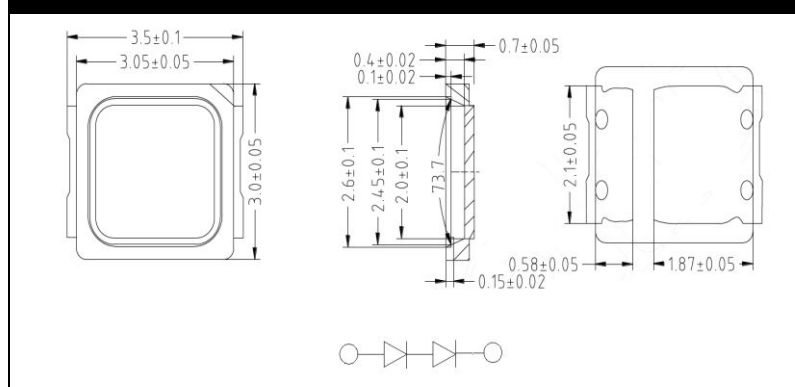
Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Light Bar
- Light Strip
- Wall Washer
- Architectural Lighting

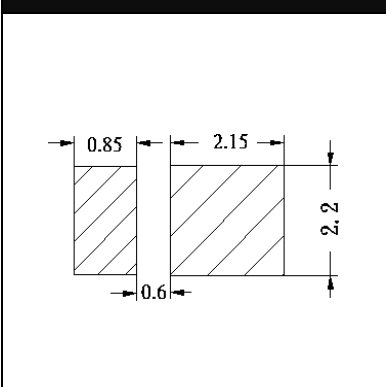
Electrical & Optical Characteristics (typ. at 150mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW08S39	Cool White	5710-6530K	120	118	6.4	150	80
NOW15S89	Natural White	3710-4260K	120	118	6.4	150	80
NOW15S90	Warm White	2725-3045K	120	108	6.4	150	80

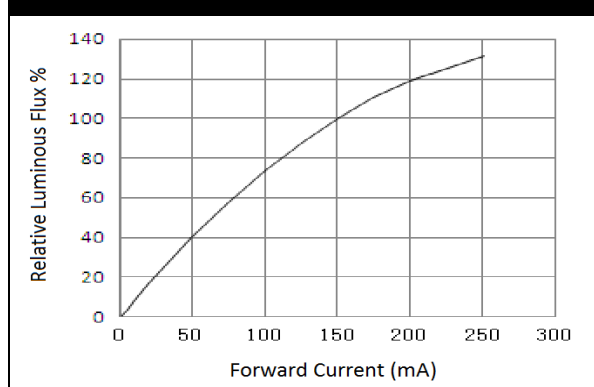
Package Dimensions (mm)



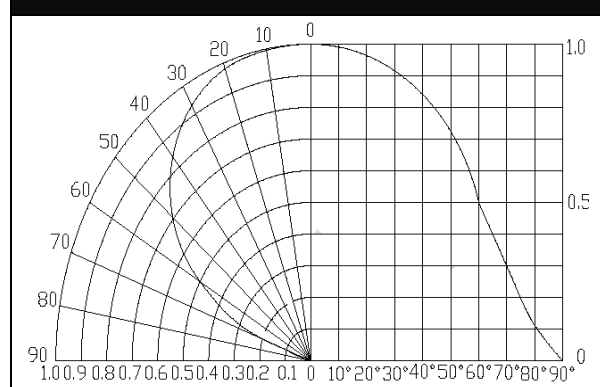
Recommended Solder Pattern



Relative Luminous Flux v.s. Forward Current



Viewing Angle



EMC LED

3030 0.2W~1.25W



Features:

- High Power LED
- Top View
- EMC Package
- CRI 80
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Backlight
- Decorative Lighting
- Wall Washer
- Architectural Lighting

0.2W Electrical & Optical Characteristics (typ. at 2.8V/65mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW26S46	Cool White	6020-7040K	110	34	2.8	65	80
NOW26S45	Cool White	5310-6020K	110	34	2.8	65	80
NOW26S44	Natural White	4745-5311K	110	34	2.8	65	80
NOW26S43	Natural White	3710-4260K	110	34	2.8	65	80
NOW26S42	Warm White	2870-3220K	110	32	2.8	65	80
NOW26S41	Warm White	2580-2870K	110	31	2.8	65	80

1W Electrical & Optical Characteristics (typ. at 6.2V/150mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW20S91	Cool White	6020-7040K	110	131	6.2	150	80
NOW20S92	Cool White	5310-6020K	110	131	6.2	150	80
NOW20S93	Natural White	4745-5311K	110	131	6.2	150	80
NOW20S94	Natural White	3710-4260K	110	131	6.2	150	80
NOW20S95	Warm White	2870-3220K	110	124	6.2	150	80
NOW20S96	Warm White	2580-2870K	110	119	6.2	150	80

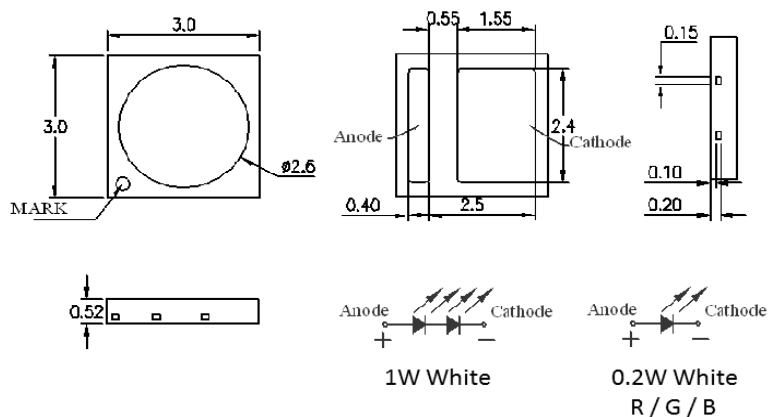
1.25W Electrical & Optical Characteristics (typ. at 50.0V/25mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW21S01	Cool White	6020-7040K	110	148	50.0	25	80
NOW21S02	Cool White	5310-6020K	110	148	50.0	25	80
NOW21S03	Natural White	4745-5311K	110	148	50.0	25	80
NOW21S04	Natural White	3710-4260K	110	148	50.0	25	80
NOW21S05	Warm White	2870-3220K	110	139	50.0	25	80
NOW21S06	Warm White	2580-2870K	110	139	50.0	25	80

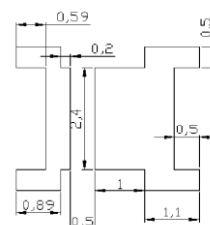
Colour Electrical & Optical Characteristics (typ. at 350mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR20S89	Red	620-630nm	120	44	2.2	350	500
NOG20S88	Green	520-535nm	120	74	3.0	350	500
NOB20S87	Blue	455-470nm	120	19	3.1	350	500

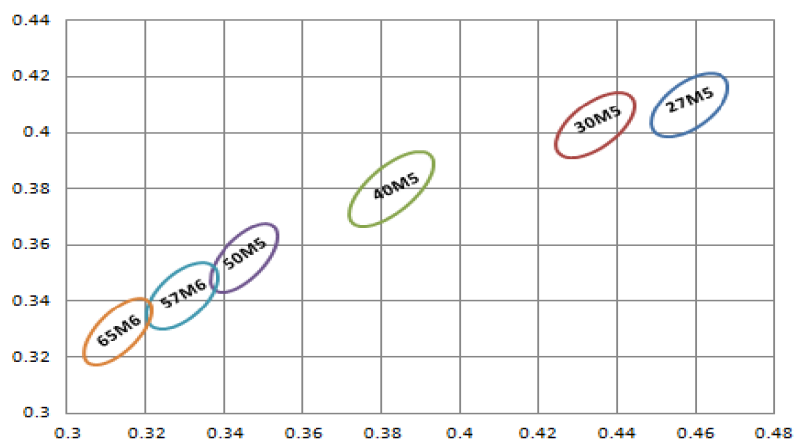
Package Dimensions (mm)



Recommended Solder Pattern



CIE Chromaticity Diagram

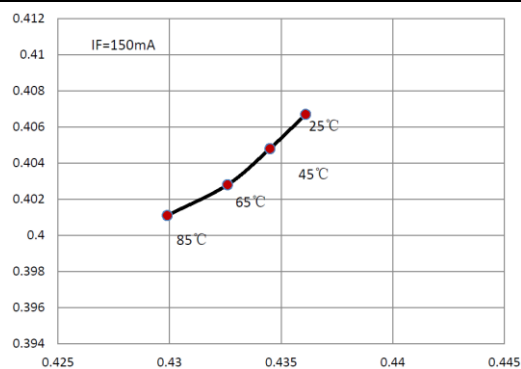


Standard MacAdam Ellipse:

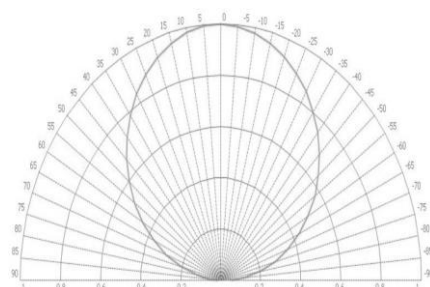
6020-7040K - 6 STEP
5310-6020K - 6 STEP
4745-5311K - 5 STEP
3710-4260K - 5 STEP
2870-3220K - 5 STEP
2580-2870K - 5 STEP

2~4 STEP may be available, please
contact for details.

Ambient Temperature v.s. CIE X, Y Shift



Viewing Angle



SMC LED

3030 0.2~1W Colour



Features:

- Mid / High Power LED
- Top View
- EMC Package
- Narrow Viewing Angle
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Decorative Lighting
- Information Board
- Automotive
- Architectural Lighting

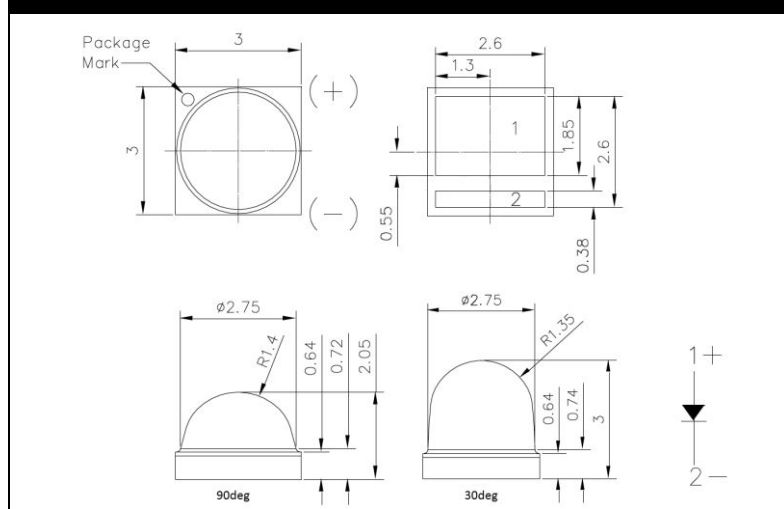
Colour Electrical & Optical Characteristics (typ. at 60mA)

Order Code	Colour	WL (nm)	2 $\theta_{1/2}$ (°)	Φ_V (lm)	V _F (V)	I _F (mA)	I _{MAX} (mA)
NOR25S51	Red	620-630nm	30	60	2.2	350	500
NOR26S73	Red	620-630nm	30	11	2.3	70	100
NOR25S49	Red	612-620nm	30	12	2.3	70	100
NOY26S72	Yellow	585-595nm	30	12	2.3	70	100
NOG25S52	Green	520-530nm	30	100	3.2	350	500
NOB25S53	Blue	460-470nm	30	28	3.2	350	500

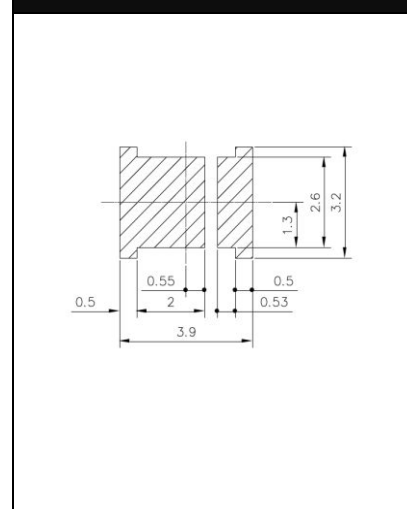
Colour Electrical & Optical Characteristics (typ. at 60mA)

Order Code	Colour	WL (nm)	2 $\theta_{1/2}$ (°)	Φ_V (lm)	V _F (V)	I _F (mA)	I _{MAX} (mA)
NOR25S54	Red	620-630nm	90	60	2.2	350	500
NOG25S55	Green	520-530nm	90	100	3.2	350	500
NOB25S56	Blue	460-470nm	90	28	3.2	350	500

Package Dimensions (mm)



Recommended Solder Pattern



PLCC6 LED

3535 RGB



Features:

- Mid Power LED
- Top View
- Black Housing
- Excellent White Balance
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

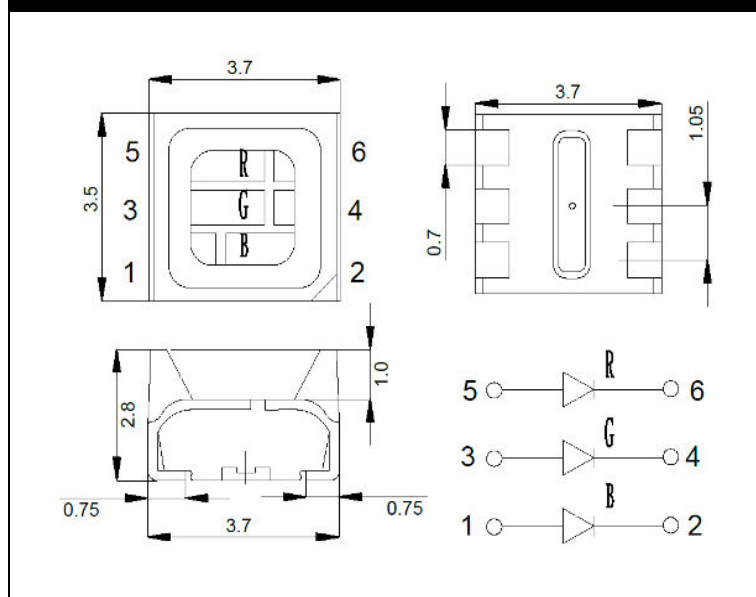
Applications:

- Commercial Lighting
- Decorative Lighting
- Indication Light
- LED Display
- Signal Board
- Light Strip

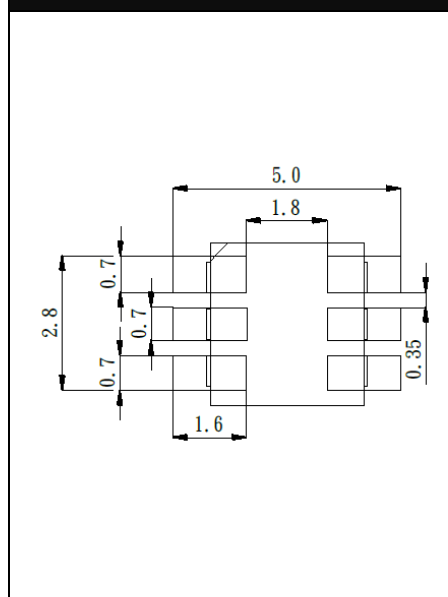
Colour Electrical & Optical Characteristics

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_v (mcd)	V_f (V)	I_f (mA)
NOM18S90BF	Red/Green/Blue 	625/525/470	120	710/1730/330	2.1/3.2/3.2	20/20/20

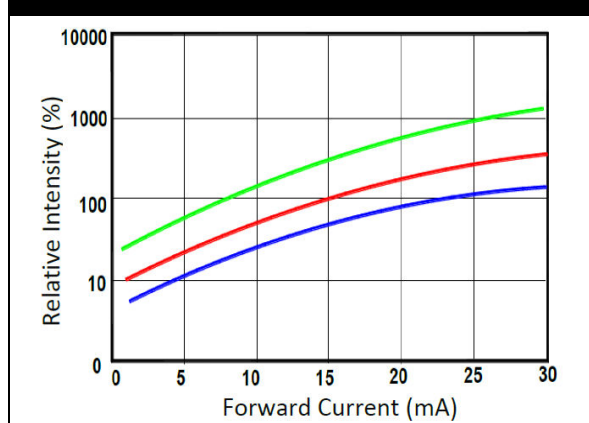
Package Dimensions (mm)



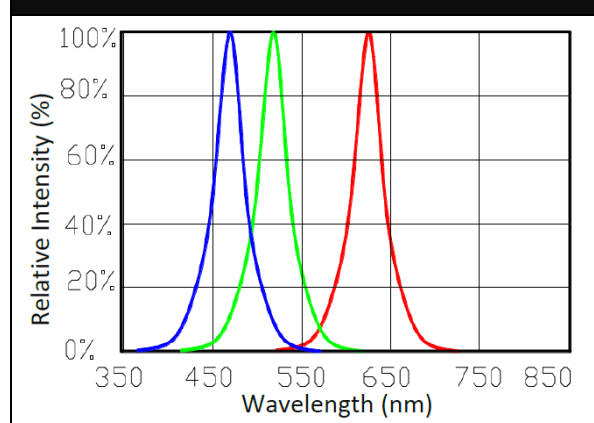
Recommended Solder Pattern



Relative Luminous Flux v.s. Forward Current



Relative Spectral Distribution



Ceramic LED

3535 Flip-Chip 1~3W



Features:

- High Power LED
- Top View
- Ceramic Package
- Flip-Chip
- Eutectic Die-Bonding
- High Efficiency
- High Lumen Output
- Compatible Package

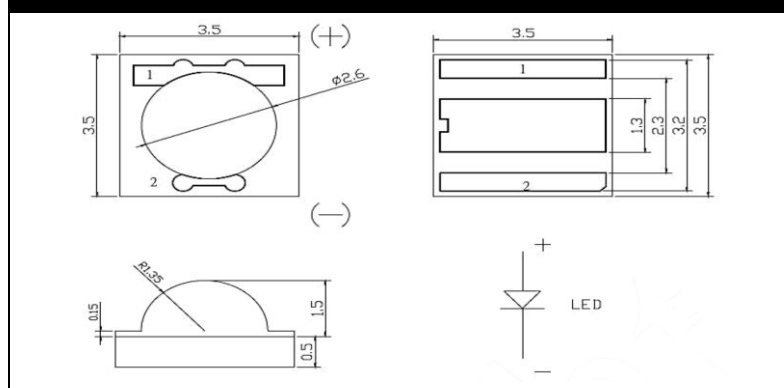
Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Outdoor Lighting
- Street Light
- Decorative Lighting
- Portable Torch
- Architectural Lighting

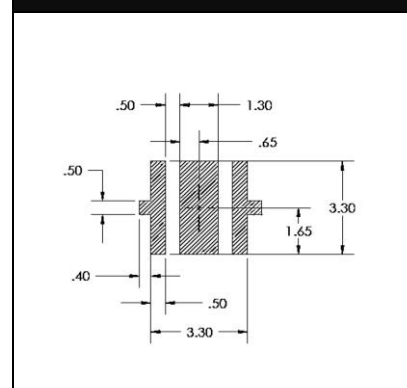
Electrical & Optical Characteristics (typ. at 350/700/1000mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW10S00	Cool White	5710-6530K	120	120/210/270	3.0	350/700/1000	80
NOW09S99	Cool White	5710-6530K	120	130/227/292	3.0	350/700/1000	70
NOW16S69	Cool White	5310-6020K	120	120/210/270	3.2	350/700/1000	80
NOW10S01	Cool White	4746-5310K	120	130/227/292	3.0	350/700/1000	70
NOW10S03	Natural White	3710-4260K	120	110/192/247	3.0	350/700/1000	80
NOW10S02	Natural White	3710-4260K	120	130/227/292	3.0	350/700/1000	70
NOW09S09	Warm White	2725-3045K	120	110/192/247	3.0	350/700/1000	80
NOW10S05	Warm White	1980-2240K	120	80/140/180	3.0	350/700/1000	70

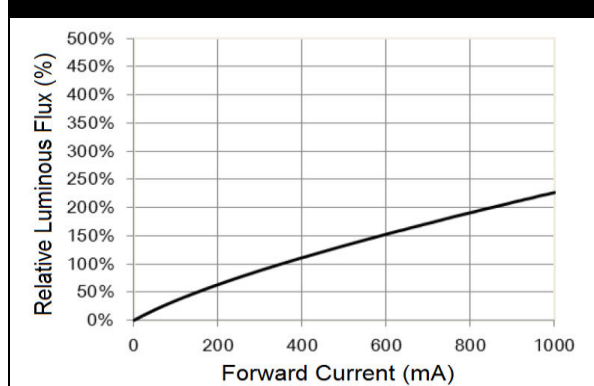
Package Dimensions (mm)



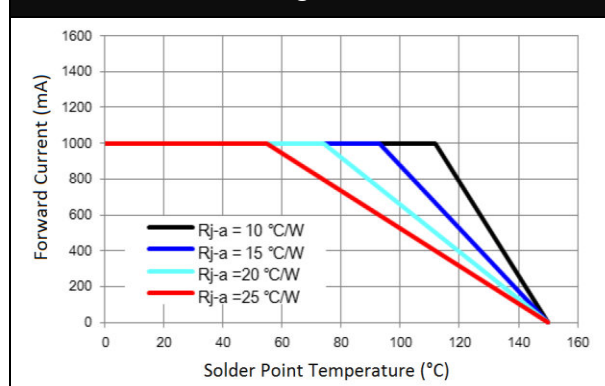
Recommended Solder Pattern



Relative Luminous Flux v.s. Forward Current

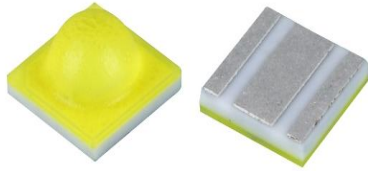


Forward Current Derating Curve



Ceramic LED

3535 1W White



Features:

- High Power LED
- Top View
- Ceramic Package
- Low Thermal Resistance
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

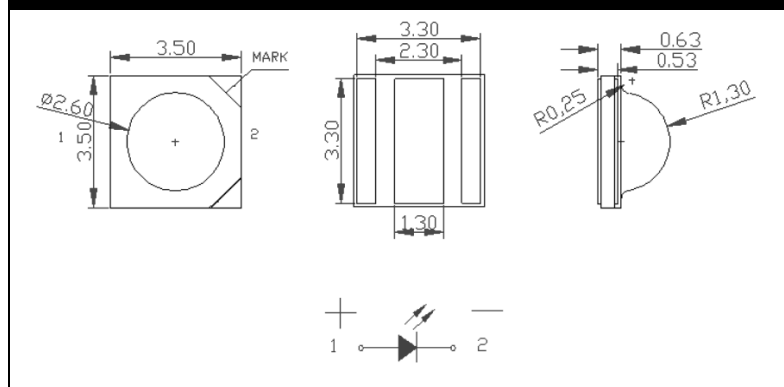
Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Outdoor Lighting
- Backlight
- Decorative Lighting
- Portable Torch
- Architectural Lighting

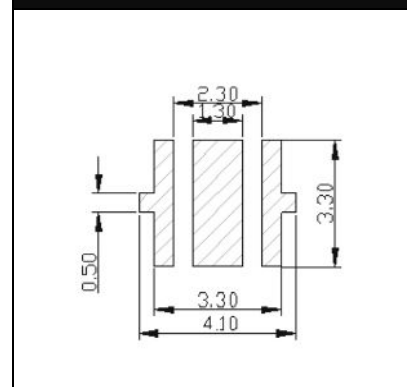
Electrical & Optical Characteristics (typ. at 350mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW21S21	Cool White	6020-7040K	120	164	3.2	350	70
NOW21S22	Cool White	5700-6500K	120	164	3.2	350	70
NOW21S23	Cool White	5310-6020K	120	164	3.2	350	70
NOW21S24	Natural White	4745-5311K	120	164	3.2	350	70
NOW21S25	Natural White	3710-4260K	120	164	3.2	350	70
NOW21S26	Warm White	2870-3220K	120	156	3.2	350	70
NOW21S27	Warm White	2580-2870K	120	148	3.2	350	70

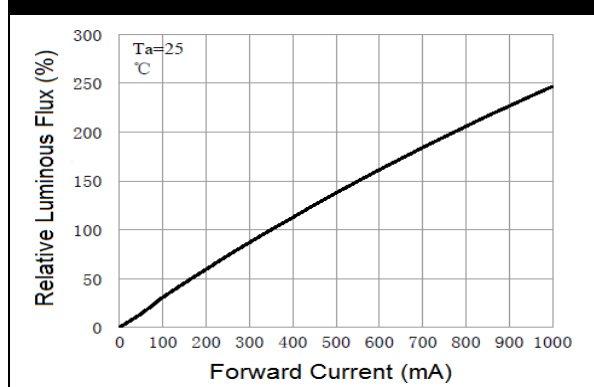
Package Dimensions (mm)



Recommended Solder Pattern



Relative Luminous Flux v.s. Forward Current



CIE Bin Structure



Ceramic LED

3535 1.2W Dual White



Features:

- High Power LED
- Top View
- Ceramic Package
- Dual Whites
- Eutectic Die-Bonding
- High Efficiency
- High Lumen Output
- Compatible Package

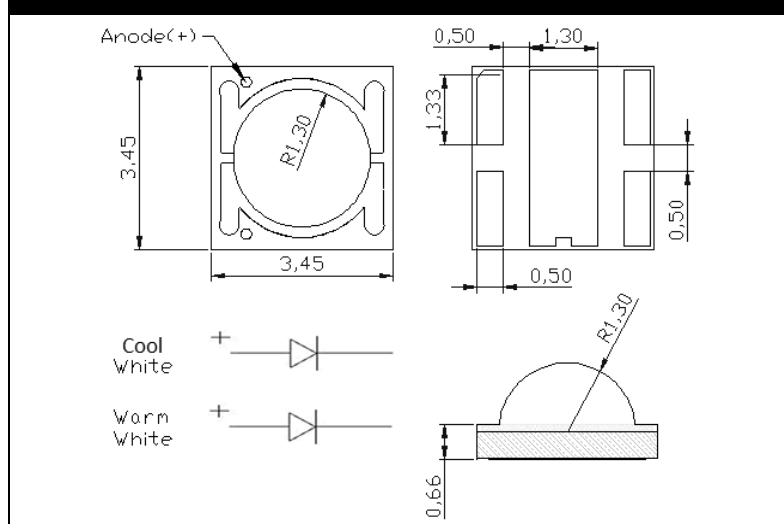
Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Outdoor Lighting
- Decorative Lighting
- Portable Torch
- Architectural Lighting
- Street Light

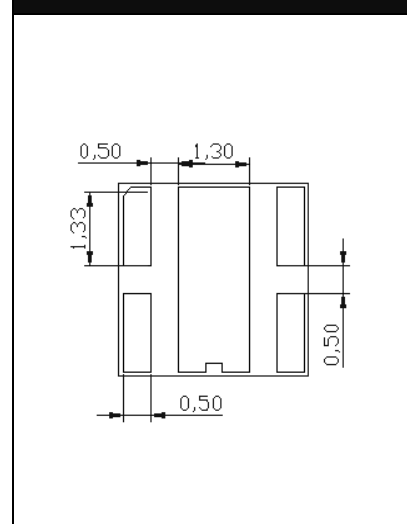
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)
N0D23S45	Cool White / Warm White	6000/3000K	130	60/45	3.2/3.2	200*2

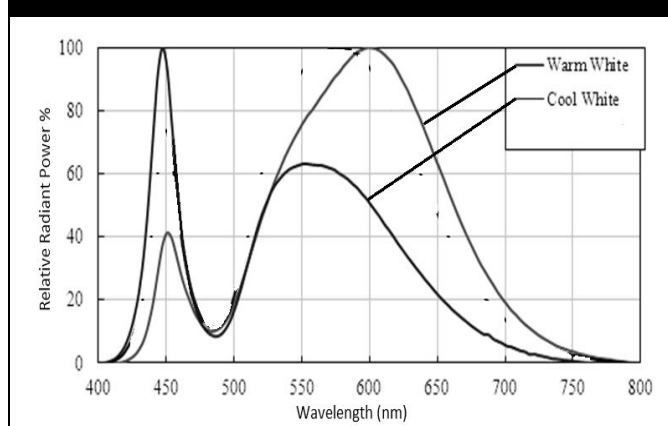
Package Dimensions (mm)



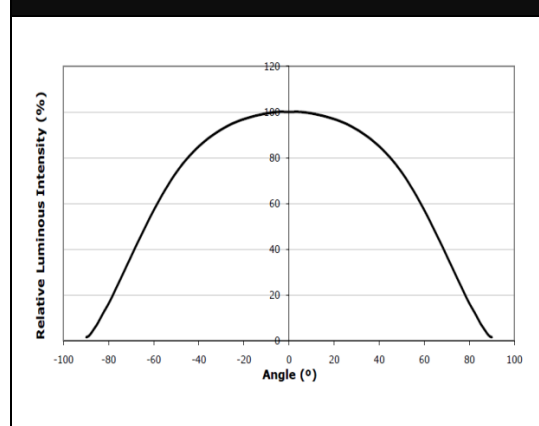
Recommended Solder Pattern



Relative Spectral Distribution



Viewing Angle



Ceramic LED

3535 1~2W Colour



Features:

- High Power LED
- Top View
- Ceramic Package
- High Current Input
- Various Colours
- High Efficiency
- High Lumen Output
- Compatible Package

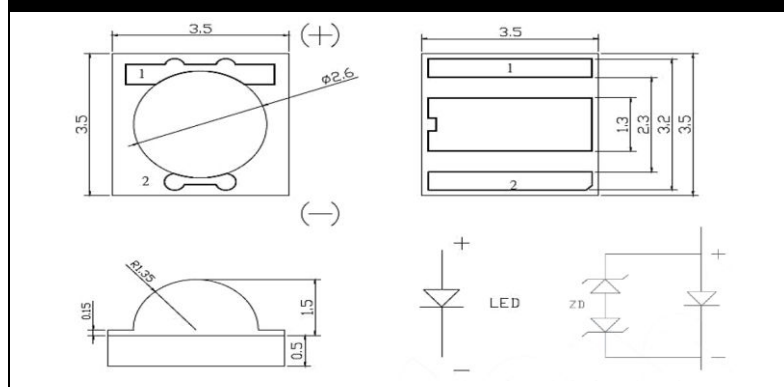
Applications:

- Commercial Lighting
- Decorative Lighting
- Portable Torch
- Architectural Lighting
- Street Light
- Wall Washer
- Stage Lighting

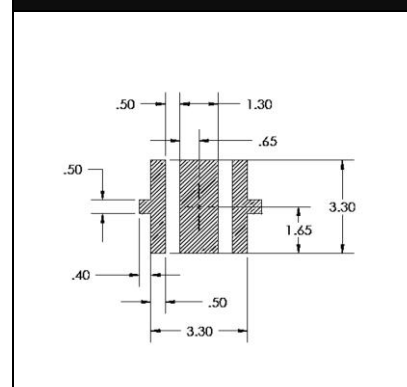
1~2W Colour Electrical & Optical Characteristics (typ. at 350/700mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	Zener
NOR09S83	Red	650-670nm	120	18/30	2.4	350/700	-
NOR09S78	Red	620-630nm	120	50/85	2.4	350/700	-
NOY09S81	Yellow	585-595nm	120	55/93	2.4	350/700	-
NOG09S79Z	Green	520-530nm	120	100/165	3.4	350/700	Yes
NOB16S70Z	Blue	470-480nm	120	35/56	3.4	350/700	Yes
NOB09S80Z	Blue	460-470nm	120	28/46	3.4	350/700	Yes
NOB09S84Z	Blue	450-460nm	120	16/26	3.4	350/700	Yes

Package Dimensions (mm)



Recommended Solder Pattern



PLCC2 LED

4014 0.2W White



Features:

- Mid Power LED
- Top View
- Various CCT
- CRI 80
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

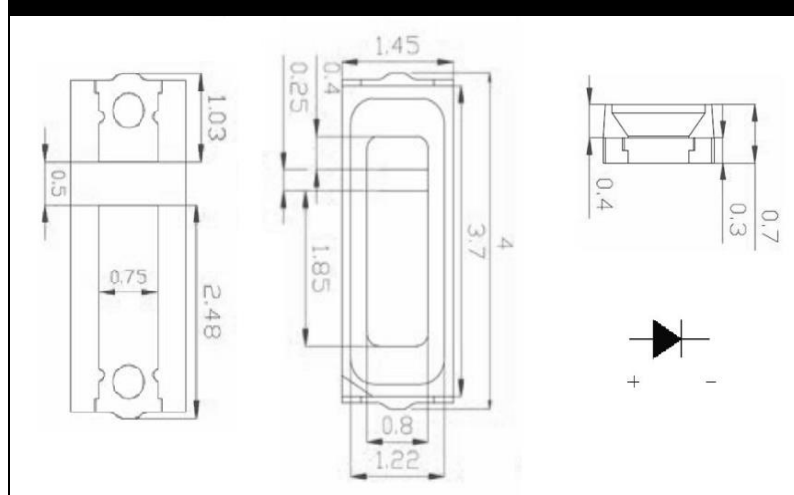
Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Backlighting
- Decorative Lighting

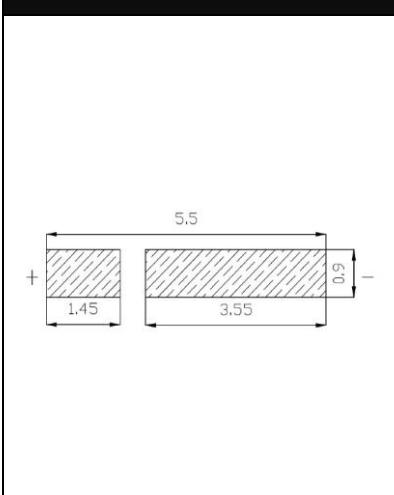
0.2W Electrical & Optical Characteristics (typ. at 2.85V/60mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW24S40	Cool White	6175-6825K	120	26	3.2	60	80
NOW24S41	Cool White	6020-6530K	120	26	3.2	60	80
NOW24S42	Cool White	5477-6020K	120	26	3.2	60	80
NOW24S43	Natural White	4900-5300K	120	26	3.2	60	80
NOW24S44	Natural White	3897-4223K	120	26	3.2	60	80
NOW24S45	Warm White	3265-3535K	120	24	3.2	60	80
NOW24S46	Warm White	2855-3025K	120	24	3.2	60	80
NOW24S47	Warm White	2645-2805K	120	24	3.2	60	80

Package Dimensions (mm)



Recommended Solder Pattern



PLCC6 LED

5050 0.2W White



Features:

- Mid Power LED
- Top View
- Various CCT
- Large Emitting Area
- 3 Channel
- High Efficiency
- High Lumen Output
- Compatible Package

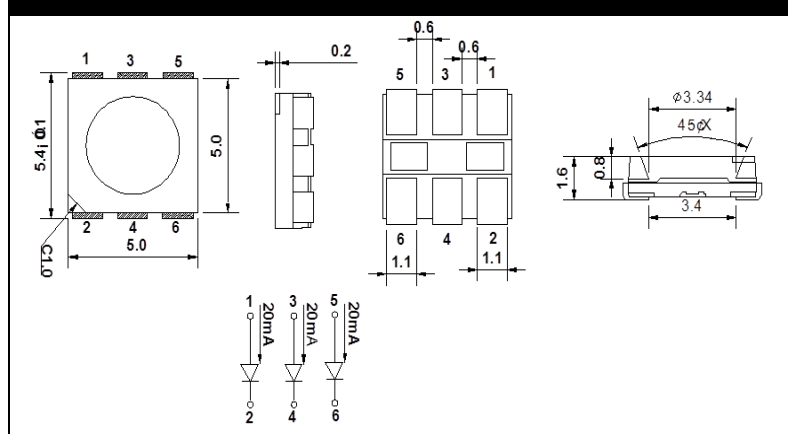
Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Decorative Lighting
- Portable Torch
- Architectural Lighting
- LED Light Strip

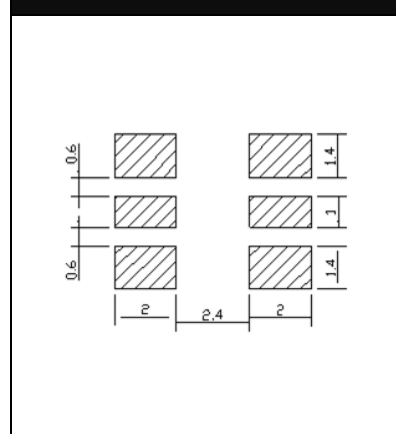
Electrical & Optical Characteristics (typ. at 60mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	I_V (mcd)	V_F (V)	I_F (mA)	CRI
NOW13S69	Cool White	5450-7400K	120	21.7	6900	3.2	60	70
NOW13S70	Cool White	5000-6000K	120	21.7	6900	3.2	60	70
NOW13S73Z	Natural White	4240-4600K	120	21.4	6800	3.1	60	70
NOW13S81	Warm White	2760-3160K	120	22.0	7000	3.2	60	80
NOW06S96	Warm White	2400-2760K	120	22.0	7000	3.2	60	70
NOW13S82	Warm White	2230-2580K	120	18.9	6000	3.2	60	70

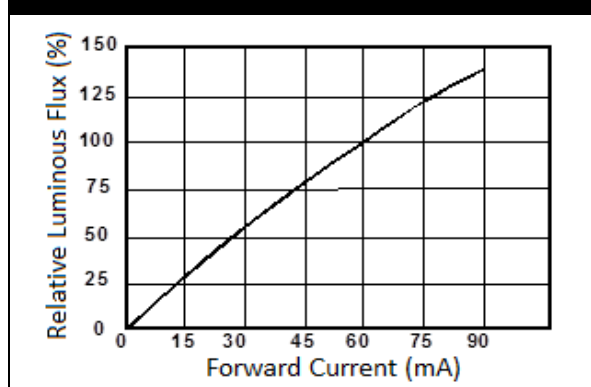
Package Dimensions (mm)



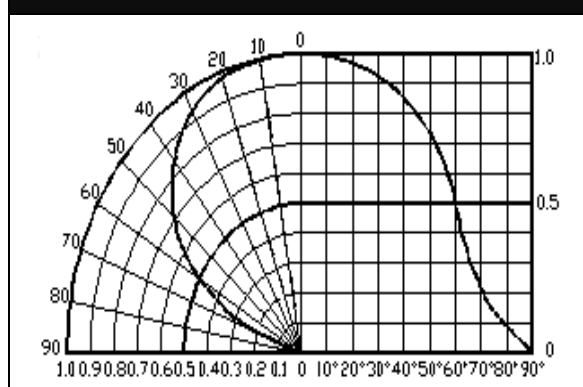
Recommended Solder Pattern



Relative Luminous Flux v.s. Forward Current



Viewing Angle



PLCC6 LED

5050 0.2W Colour / RGB



Features:

- Mid Power LED
- Top View
- Various Colour
- Single / Multi-Colours
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Decorative Lighting
- Information Board
- LED Display
- LED Light Strip
- LED Light Bar

Colour Electrical & Optical Characteristics (typ. at 20mA) White Package

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR13S17	Red	620-635nm	120	1900	1.9	60	150
NOA06S91	Amber	600-615nm	120	1800	1.9	60	90
NOY13S19	Yellow	585-597nm	120	1900	2.0	60	90
NOG06S92	Green	520-535nm	120	4600	3.3	60	90
N0B04S85	Blue	462-473nm	120	1000	3.3	60	90

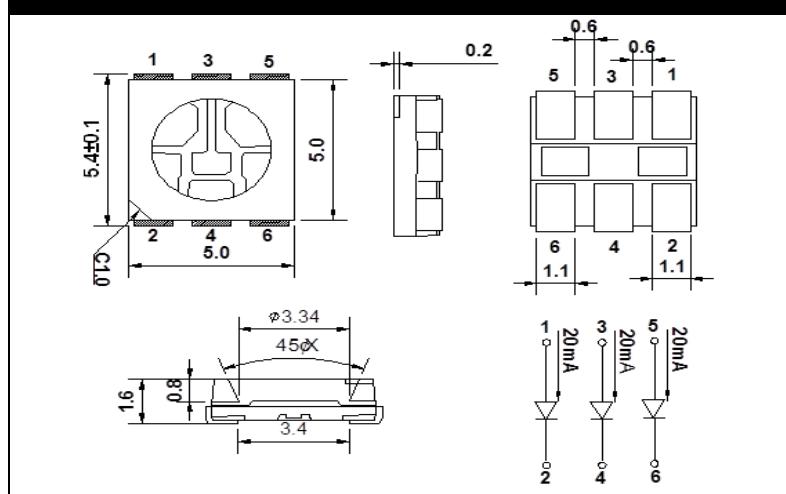
Colour Electrical & Optical Characteristics (typ. at 20mA) White Package

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
NOM03S95	Red/Green/Blue	622/527/468nm	120	700/1750/320	2/3.2/3.2	20/20/20
NOM18S28	Red/Green/Blue	630/520/465nm	120	160/1000/160	2.0/3.3/3.2	20/20/20

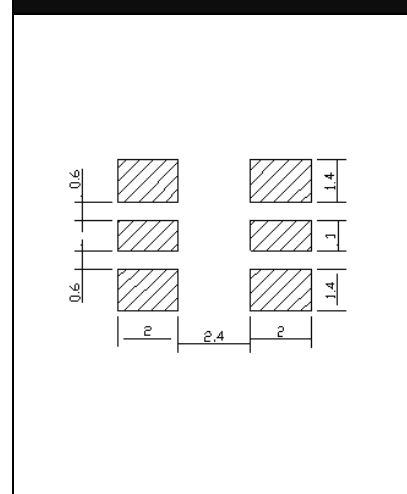
Colour Electrical & Optical Characteristics (typ. at 20mA) Black Surface Package

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
NOM03S88BS	Red/Green/Blue	623/525/470nm	120	860/1650/350	1.9/3.2/3.2	20/20/20

Package Dimensions (mm)

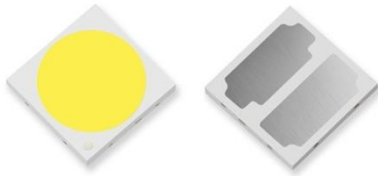


Recommended Solder Pattern



EMC LED

5050 3.6W / 5.2W White



Features:

- High Power LED
- Top View
- EMC Package
- CRI 80
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Decorative Lighting
- Architectural Lighting

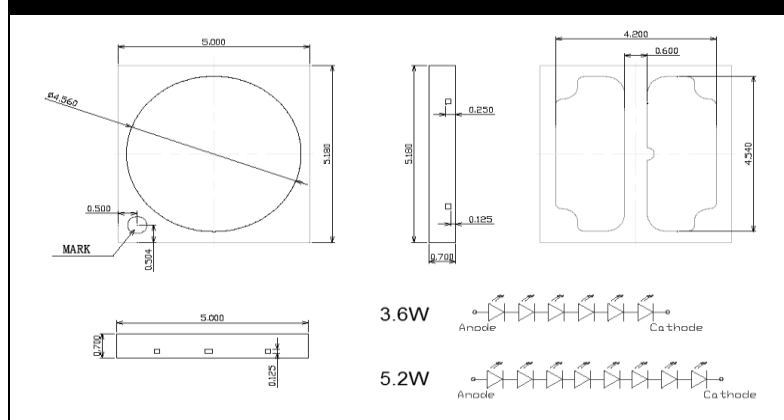
3.6W Electrical & Optical Characteristics (typ. at 200mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW21S41	Cool White	6020-7040K	115	500	18.0	200	80
NOW21S42	Cool White	5310-6020K	115	500	18.0	200	80
NOW21S43	Natural White	4745-5311K	115	500	18.0	200	80
NOW21S44	Natural White	3710-4260K	115	500	18.0	200	80
NOW21S45	Warm White	2870-3220K	115	490	18.0	200	80
NOW21S46	Warm White	2580-2870K	115	460	18.0	200	80

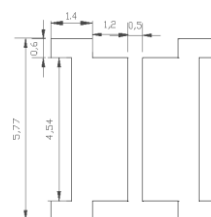
5.2W Electrical & Optical Characteristics (typ. at 200mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW21S51	Cool White	6020-7040K	115	650	26.0	200	80
NOW21S52	Cool White	5310-6020K	115	680	26.0	200	80
NOW21S53	Natural White	4745-5311K	115	680	26.0	200	80
NOW21S54	Natural White	3710-4260K	115	680	26.0	200	80
NOW21S55	Warm White	2870-3220K	115	630	26.0	200	80
NOW21S56	Warm White	2580-2870K	115	580	26.0	200	80

Package Dimensions (mm)

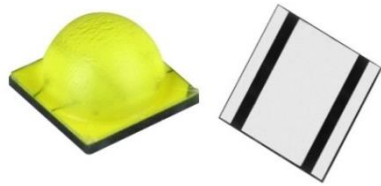


Recommended Solder Pattern



Ceramic LED

5050 4.2W White



Features:

- High Power LED
- Top View
- Ceramic Package
- Low Thermal Resistance
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

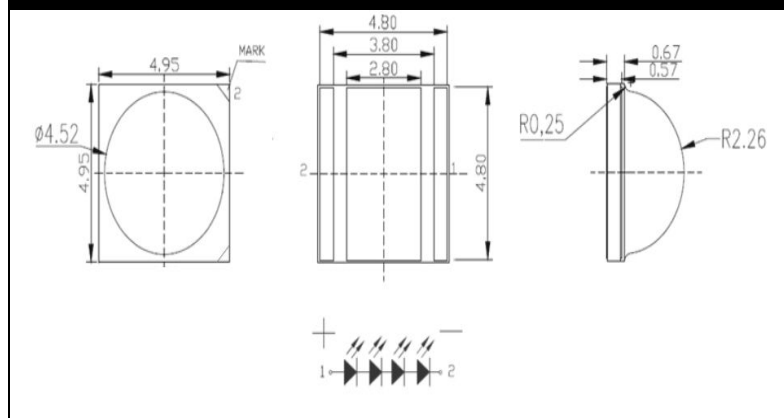
Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Outdoor Lighting
- Decorative Lighting
- Portable Torch
- Architectural Lighting
- Street Light

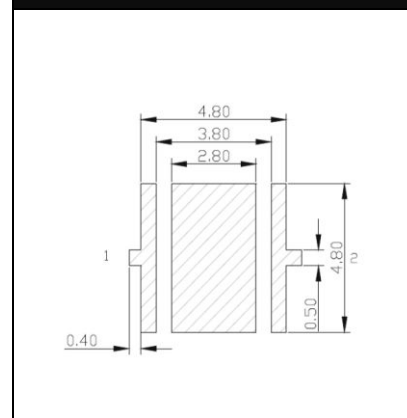
Electrical & Optical Characteristics (typ. at 350mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW21S31	Cool White	6020-7040K	145	445	12.0	350	70
NOW21S32	Cool White	5700-6500K	145	480	12.0	350	70
NOW21S33	Cool White	5310-6020K	145	475	12.0	350	70
NOW21S34	Natural White	4745-5311K	145	460	12.0	350	70
NOW21S35	Natural White	3710-4260K	145	430	12.0	350	70
NOW21S36	Warm White	2870-3220K	145	415	12.0	350	70
NOW21S37	Warm White	2580-2870K	145	400	12.0	350	70

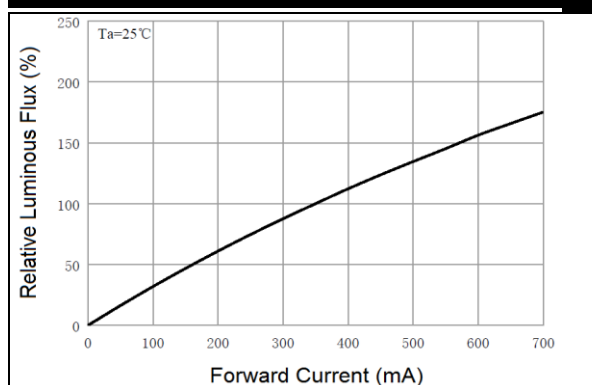
Package Dimensions (mm)



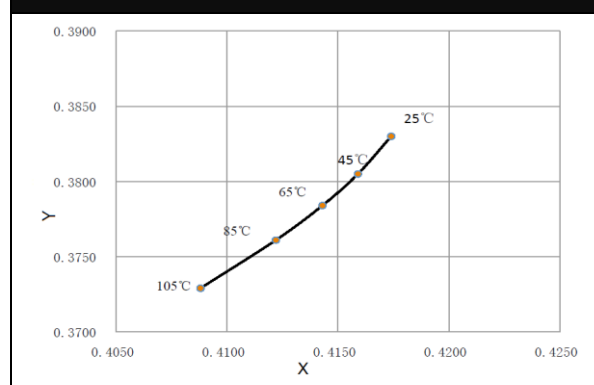
Recommended Solder Pattern



Relative Luminous Flux v.s. Forward Current



CIE X, Y Shift v.s. Ta



Ceramic LED

5252 4W White / Dual White Dom Lens



Features:

- High Power LED
- Top View
- AlN Ceramic Package
- Single White / Dual White
- Compatible Package
- High Efficiency
- High Lumen Output
- Flexible Circuit Design

Applications:

- Stage Lighting
- Commercial Lighting
- Decorative Lighting
- Wall Washer
- Architectural Lighting
- Torch Lighting

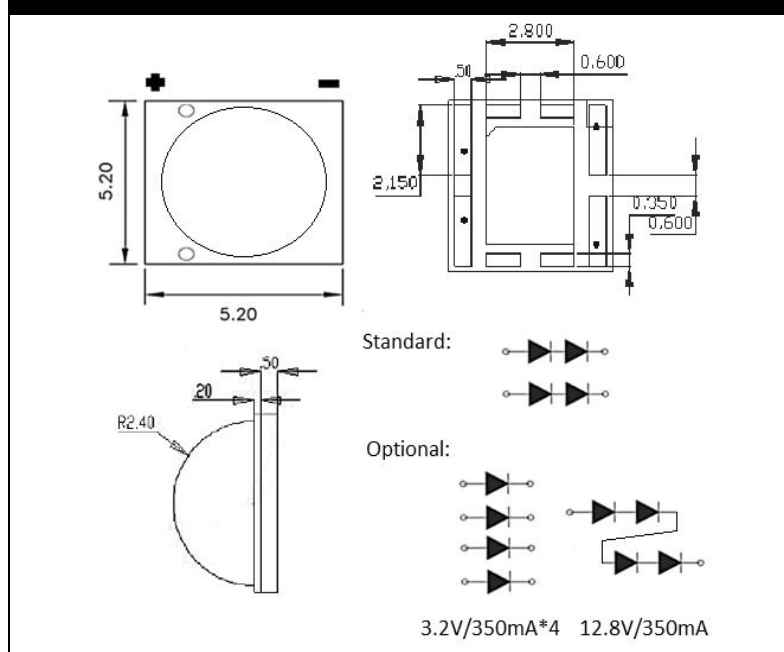
Electrical & Optical Characteristics (typ. at 350mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
N0W21S81	Sky White	7000-10000K	125	410	6.4	350*2	80
N0W21S82	Cool White	5000-7000K	125	440	6.4	350*2	80
N0W21S83	Natural White	3700-4500K	125	410	6.4	350*2	80
N0W21S84	Warm White	2580-3220K	125	350	6.4	350*2	80

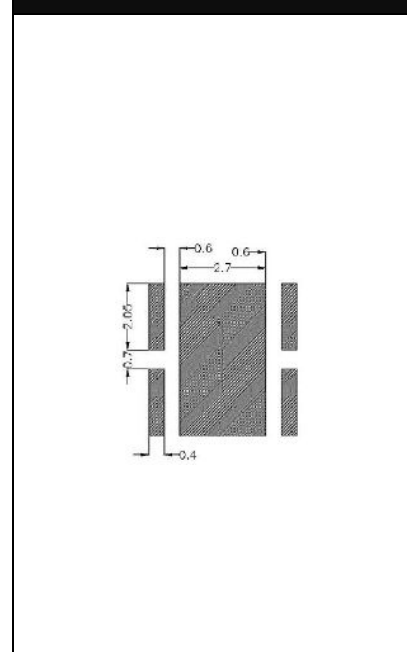
Colour Electrical & Optical Characteristics (typ. at 350mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)
N0D14S29	CW/WW	5700/3000K	125	190/160	6.5/6.5	350*2

Package Dimensions (mm)

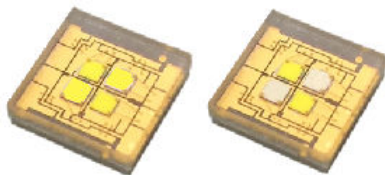


Recommended Solder Pattern



Ceramic LED

5252 4W White / Dual White Flat Lens



Features:

- High Power LED
- Top View
- AlN Ceramic Package
- Single White / Dual White
- Compatible Package
- High Efficiency
- High Lumen Output
- Flexible Circuit Design

Applications:

- Stage Lighting
- Commercial Lighting
- Decorative Lighting
- Wall Washer
- Architectural Lighting
- Torch Lighting

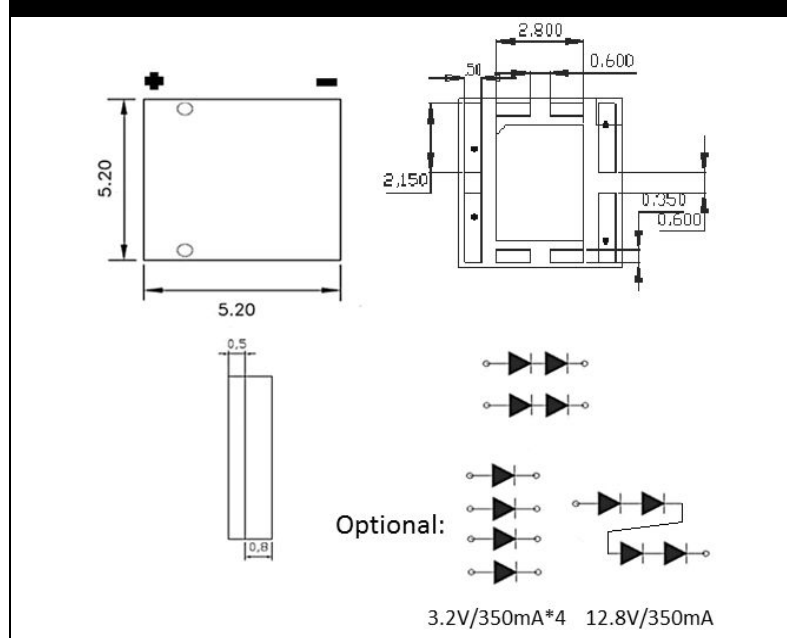
Electrical & Optical Characteristics (typ. at 350mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
N0W21S86	Sky White	7000-10000K	135	410	6.4	350*2	80
N0W21S87	Cool White	5000-7000K	135	440	6.4	350*2	80
N0W21S89	Natural White	3700-4500K	135	410	6.4	350*2	80
N0W21S88	Warm White	2580-3220K	135	350	6.4	350*2	80

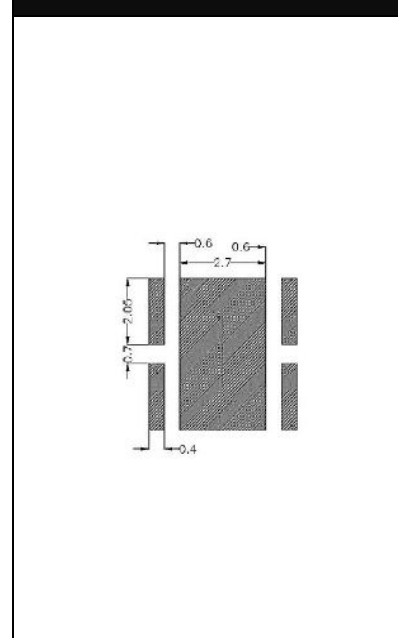
Colour Electrical & Optical Characteristics (typ. at 350mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)
N0D14S30	CW/WW	5700/3000K	135	190/160	6.5/6.5	350*2

Package Dimensions (mm)

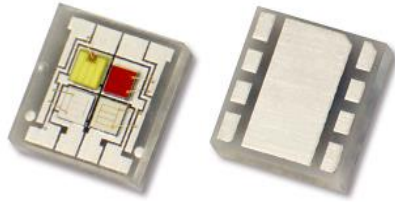


Recommended Solder Pattern



Ceramic LED

5252 4W WRGB/ARGB/YRGB Flat Lens



Features:

- High Power LED
- Top View
- AlN Ceramic Package
- Multi Colours
- Compatible Package
- High Efficiency
- High Lumen Output
- Flexible Circuit Design

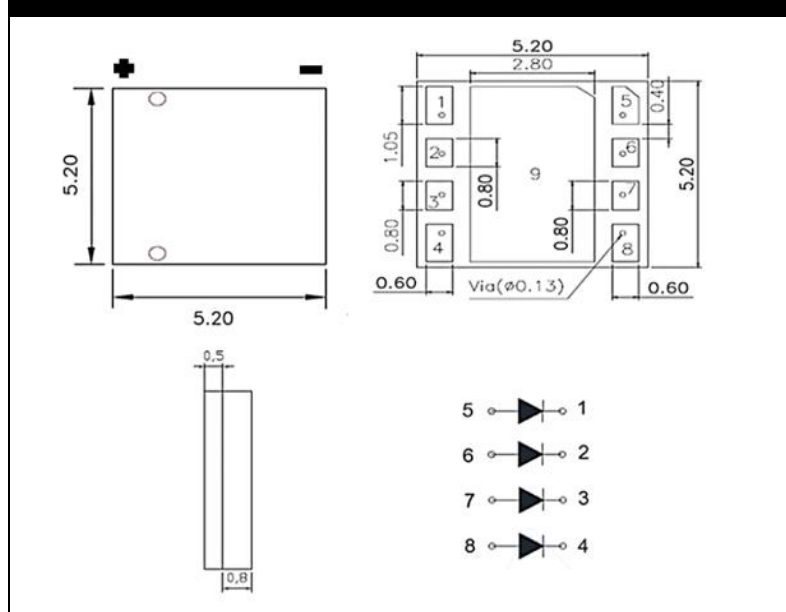
Applications:

- Stage Lighting
- Commercial Lighting
- Decorative Lighting
- Wall Washer
- Architectural Lighting

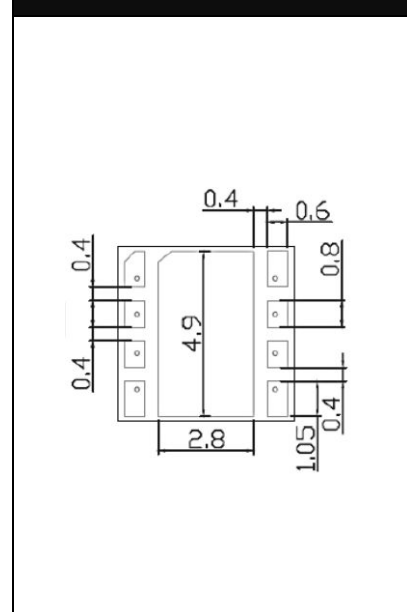
Colour Electrical & Optical Characteristics (typ. at 350mA)

Order Code	Colour	CCT (K) / WL (nm)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)
NOM04S53	CW/R/G/B	6700K/625/525/460	130	75/40/75/18	3/2/3/3	350*4
NOM19S93	CW/R/G/B	6000K/625/520/460	135	95/40/70/20	3/2/3/3	350*4
NOM23S11	NW/R/G/B	4000K/625/520/460	135	85/40/70/20	3/2/3/3	350*4
NOM19S95	WW/R/G/B	2900K/625/520/460	135	75/40/70/20	3/2/3/3	350*4
NOM15S66	A/R/G/B	605/625/525/460	130	35/30/60/20	2/2/3/3	350*4
NOM04S78	Y/R/G/B	590/625/525/460	135	40/30/60/20	2/2/3/3	350*4

Package Dimensions (mm)

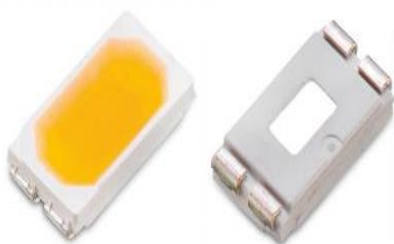


Recommended Solder Pattern



PLCC4 LED

5630 0.2W / 0.5W White



Features:

- Mid Power LED
- Top View
- Individual Heat Path
- Large Emitting Area
- Various CCT and CRI
- High Efficiency
- High Lumen Output
- Compatible Package

Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Decorative Lighting
- Portable Torch
- Architectural Lighting

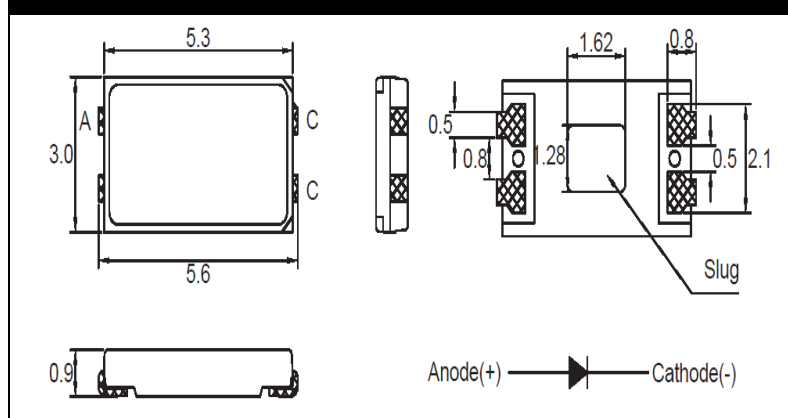
0.2W Electrical & Optical Characteristics (typ. at 3.2V/60mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW02S61	Cool White	5300-6070K	120	23	3.2	60	70
NOW02S62	Cool White	5300-6070K	120	22	3.2	60	80
NOW02S63	Natural White	3710-4260K	120	23	3.2	60	70
NOW02S64	Natural White	3710-4260K	120	22	3.2	60	80
NOW02S65	Warm White	2870-3220K	120	21	3.2	60	70
NOW02S66	Warm White	2870-3220K	120	20	3.2	60	80

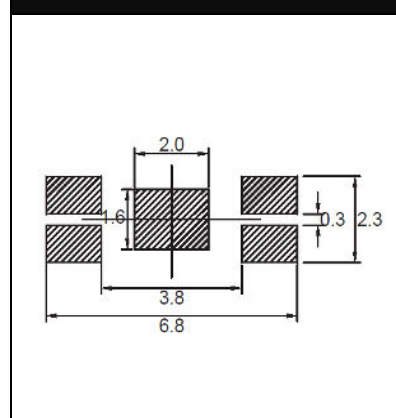
0.5W Electrical & Optical Characteristics (typ. at 3.3V/150mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW15S91	Sky White	~24600K	120	55	3.3	150	---
NOW02S00	Cool White	5300-6070K	120	65	3.3	150	70
NOW02S01	Cool White	5300-6070K	120	60	3.3	150	80
NOW15S94	Cool White	4700-5300K	120	60	3.2	150	70
NOW02S02	Natural White	3710-4260K	120	65	3.8	150	70
NOW02S03	Natural White	3710-4260K	120	60	3.3	150	80
NOW02S04	Warm White	2870-3220K	120	60	3.3	150	70
NOW02S05	Warm White	2870-3220K	120	55	3.3	150	80

Package Dimensions (mm)



Recommended Solder Pattern



PLCC2 LED

5730 0.5W White



Features:

- Mid Power LED
- Top View
- CRI 80
- Individual Heat Path
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

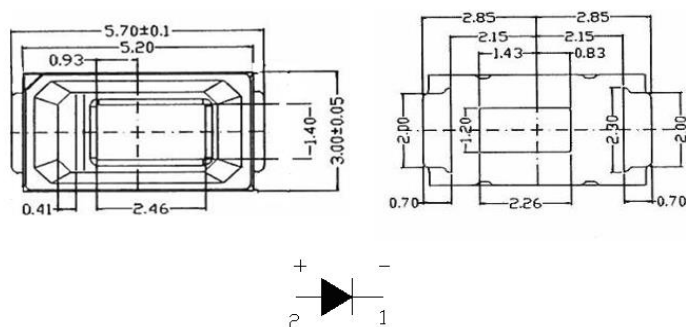
Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Backlight
- Decorative Lighting

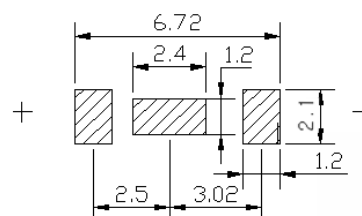
0.5W Electrical & Optical Characteristics (typ. at 3.2V/150mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	CRI
NOW24S50	Cool White	6175-6825K	120	64	3.2	150	80
NOW24S51	Cool White	6020-6530K	120	64	3.2	150	80
NOW24S52	Cool White	5477-6020K	120	64	3.2	150	80
NOW24S53	Natural White	4900-5300K	120	64	3.2	150	80
NOW24S54	Natural White	3897-4223K	120	64	3.2	150	80
NOW24S55	Warm White	3265-3535K	120	59	3.2	150	80
NOW24S56	Warm White	2855-3025K	120	59	3.2	150	80
NOW24S57	Warm White	2645-2805K	120	59	3.2	150	80

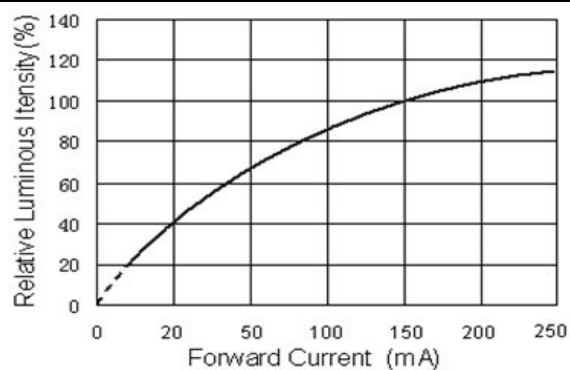
Package Dimensions (mm)



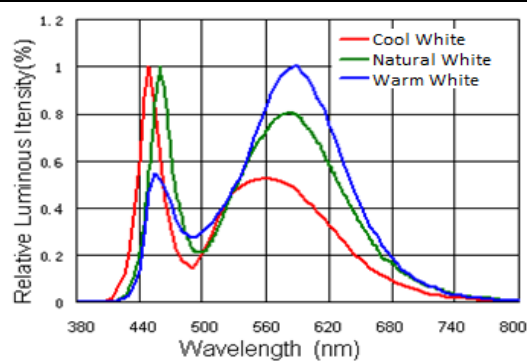
Recommended Solder Pattern



Relative Luminous Flux v.s. Forward Current



Relative Spectrum Distribution



PLCC2 LED

7020 0.5W White



Features:

- Mid Power LED
- Top View
- Large Emitting Area
- With Zener Diode
- Various CCT Choice
- High Efficiency
- High Lumen Output
- Compatible Package

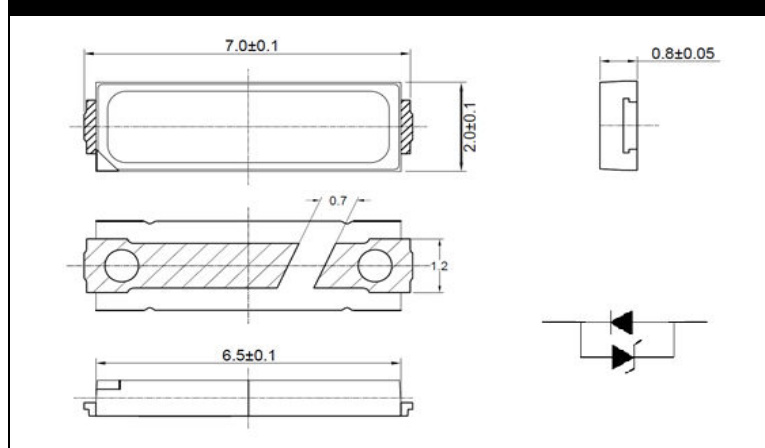
Applications:

- Backlighting
- Commercial Lighting
- General Lighting
- Indoor Lighting

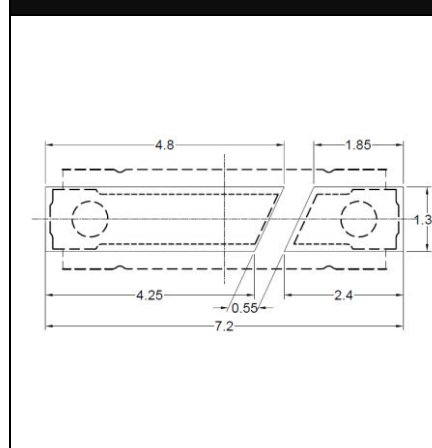
0.5W Electrical & Optical Characteristics (typ. at 3.2V/150mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W02S85	Sky White	2580-178000K	120	48	3.2	150	200

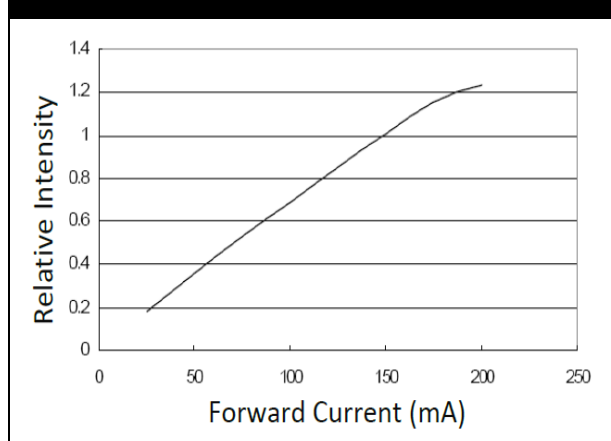
Package Dimensions (mm)



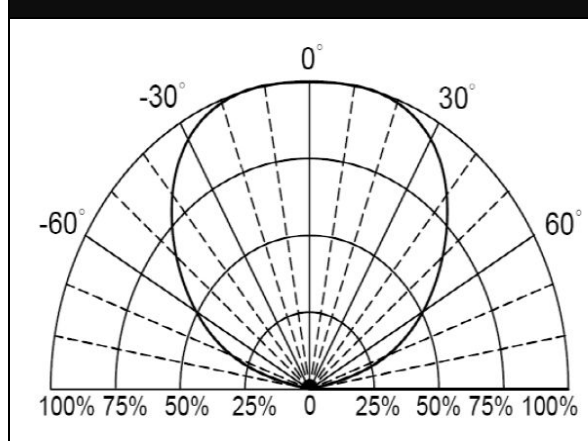
Recommended Solder Pattern



Relative Luminous Flux v.s. Forward Current



Directive Radiation



SMD Lamp

5mm Round 5.4t



Features:

- Low Power LED
- Top View
- Small Viewing Angle
- Water Clear / Diffused Lens
- Suitable for SMD
- High Efficiency
- High Intensity Output
- Reel Packing

Applications:

- Indication Light
- Traffic Signal
- Information Board
- Decoration Lighting
- Signal and Switch

White Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W23S07	Sky White	5600-46500K	30	2300	3.2	20	30

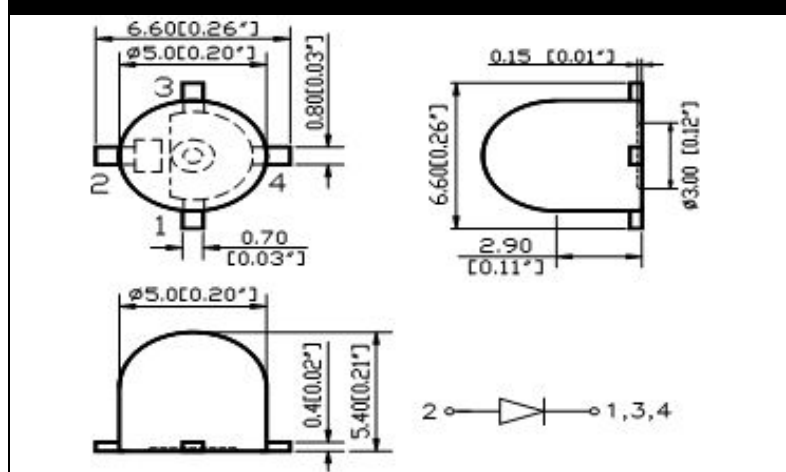
Colour (Water Clear Lens) Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR23S08	Red	630-650nm	30	800	2.0	20	30
NOR23S05	Red	615-630nm	30	4400	2.0	20	30
NOA23S01	Amber	600-610nm	30	3700	2.1	20	30
NOY23S06	Yellow	585-595nm	30	1500	2.0	20	30
NOG18S29	Green	565-576nm	30	500	2.0	20	30
NOG23S03	Green	520-530nm	30	7500	3.1	20	30
NOG23S04	Green	500-510nm	30	3600	3.3	20	30
N0B23S02	Blue	465-475nm	30	1100	3.2	20	30

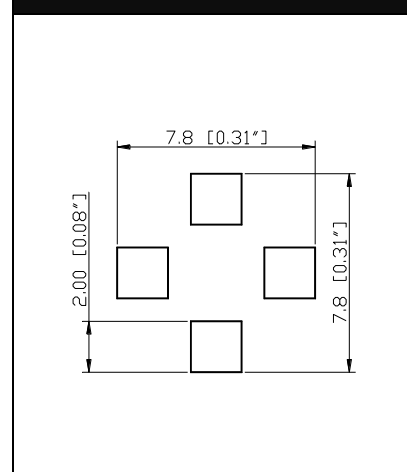
Colour (Diffused Lens) Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR18S30	Red	615-630nm	160	110	2.0	20	30

Package Dimensions (mm)

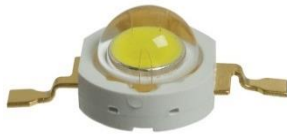


Recommended Solder Pattern



PLCC2 LED

K1 1W / 2W



Features:

- High Power LED
- Top View
- Easy for SMT or Hand Solder
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- General Lighting
- Commercial Lighting
- Indoor Lighting
- Outdoor Lighting
- Spot Light
- Torch Light

1W White Electrical & Optical Characteristics (typ. at 350mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W06S19	Cool White	4750-10000K	120	125	3.2	350	500
N0W07S20	Natural White	3700-5000K	120	100	3.2	350	500
N0W07S14	Warm White	2800-3800K	120	85	3.2	350	500
N0W23S32	Warm White	1900-2400K	145	75	3.3	350	700

1W Colour Electrical & Optical Characteristics (typ. at 350mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R06S18	Red	620-630nm	135	50	2.2	350	500
N0A06S16	Amber	585-595nm	135	50	2.2	350	500
N0A06S15	Amber	585-590nm	135	50	2.2	350	500
N0G06S21	Green	522-535nm	155	75	3.4	350	360
N0B06S17	Blue	490-510nm	135	75	3.4	350	500
N0B06S20	Blue	460-470nm	155	25	3.2	350	360

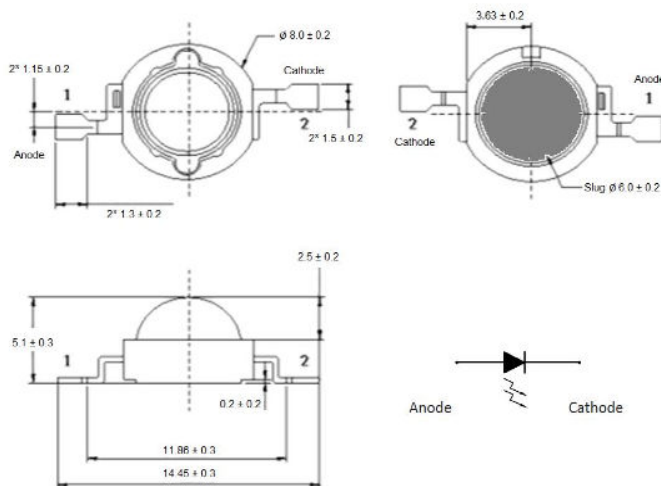
2W White Electrical & Optical Characteristics (typ. at 700mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W09S24	Cool White	5000-10000K	120	220	3.2	700	710
N0W09S23	Natural White	3800-5000K	120	170	3.2	700	710
N0W09S25	Warm White	2500-3800K	120	150	3.2	700	710

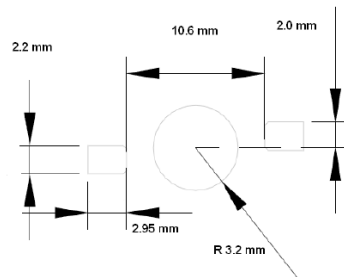
2W Colour Electrical & Optical Characteristics (typ. at 700mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	Φ_V (lm)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R09S26	Red	625-630nm	120	100	2.0	700	710
N0A09S35	Amber	585-595nm	135	115	2.2	700	710
N0G09S28	Green	515-535nm	120	125	3.4	700	710
N0B09S27	Blue	460-470nm	120	40	3.2	700	710

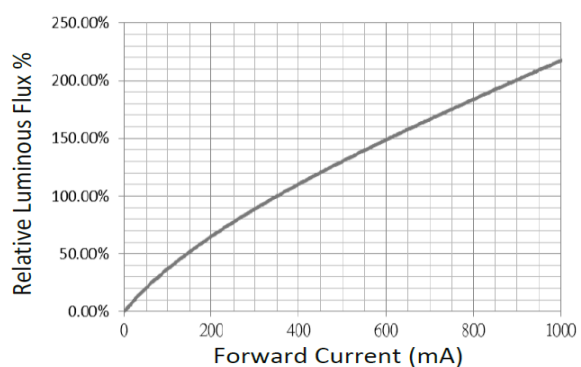
Package Dimensions (mm)



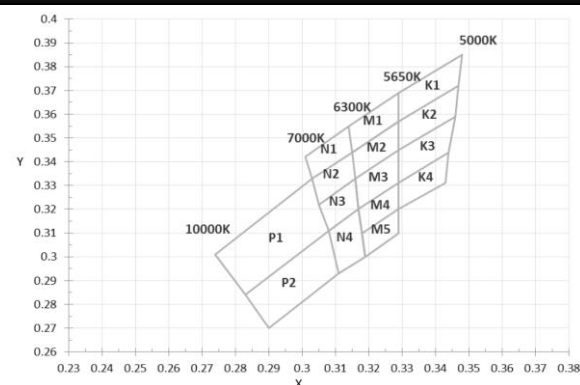
Recommended Solder Pattern



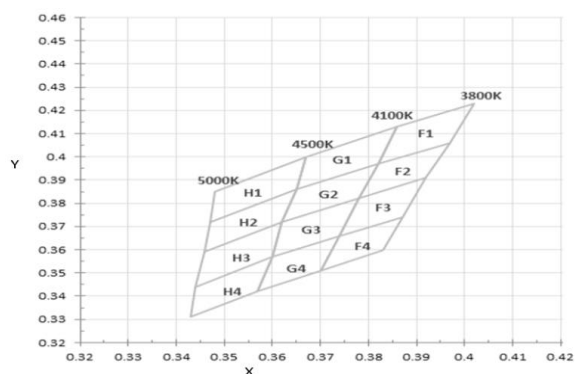
Relative Luminous Flux v.s. Forward Current



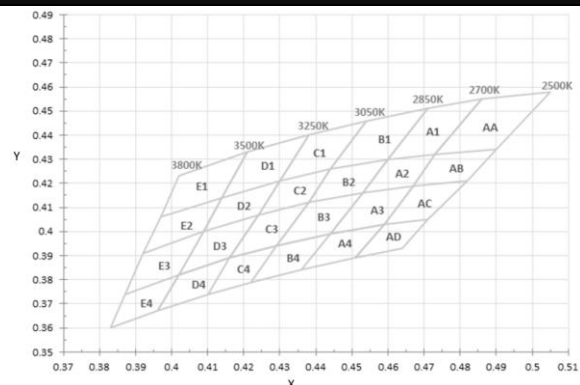
CIE Chromaticity Diagram Cool White



CIE Chromaticity Diagram Natural White



CIE Chromaticity Diagram Warm White



Lead Frame

Lead Frame	
- 2421	71-75
- 2520	76-77
- 3022	78
- 3228	79

Lead Frame

2421 Type A



Features:

- Top View
- Low Power LED
- Small Viewing Angle
- Various Colour
- Subminiature LED
- High Efficiency
- High Intensity Output
- Reel Packing

Applications:

- Indication Light
- Traffic Signal
- Information Board
- Decoration Lighting
- Signal and Switch

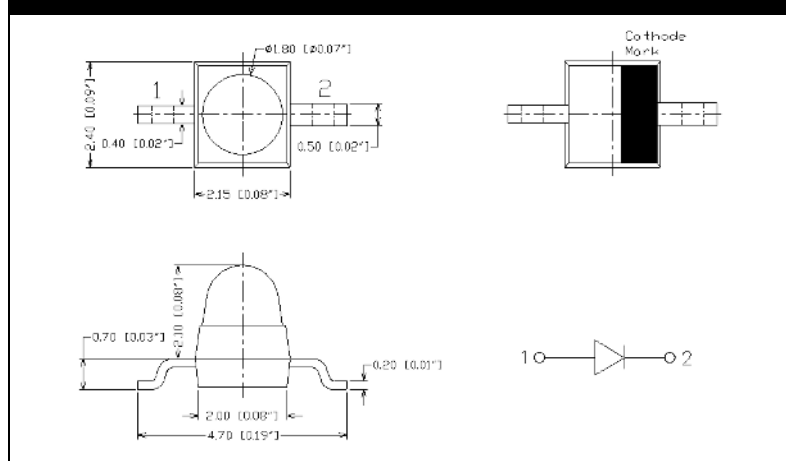
White Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W12S29	Sky White	5600-46500K	165	380	3.2	20	30

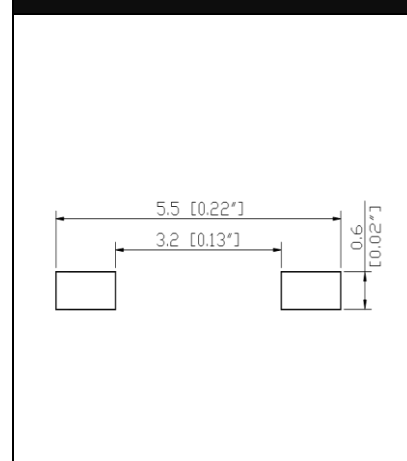
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R12S28	Red	625-635nm	20	2000	2.0	20	30
N0R12S27	Red	615-630nm	20	2400	2.0	20	30
N0Y12S30	Yellow	585-595nm	20	2600	2.0	20	30
N0G12S25	Green	565-576nm	20	520	2.0	20	30
N0G12S26	Green	520-530nm	20	10000	3.2	20	30
N0B12S24	Blue	460-470nm	20	1300	3.1	20	30

Package Dimensions (mm)



Recommended Solder Pattern



Lead Frame

2421 Type B



Features:

- Top View
- Low Power LED
- Small Viewing Angle
- Various Colour
- Subminiature LED
- High Efficiency
- High Intensity Output
- Reel Packing

Applications:

- Indication Light
- Traffic Signal
- Information Board
- Decoration Lighting
- Signal and Switch

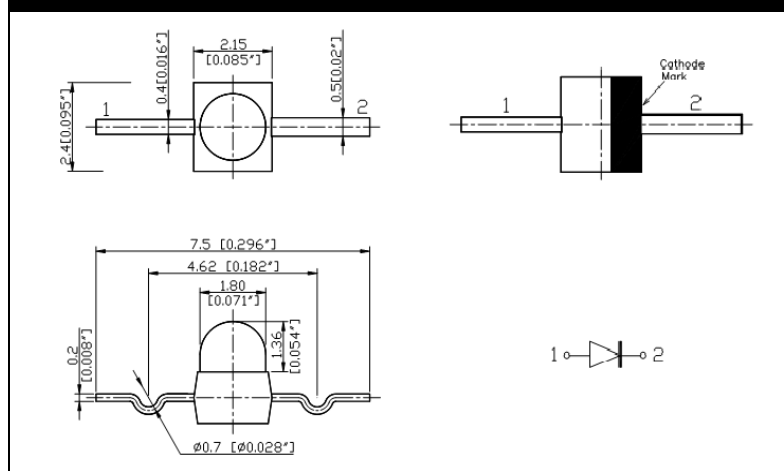
White Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W12S21	Sky White	5600-46500K	165	115	3.2	20	30

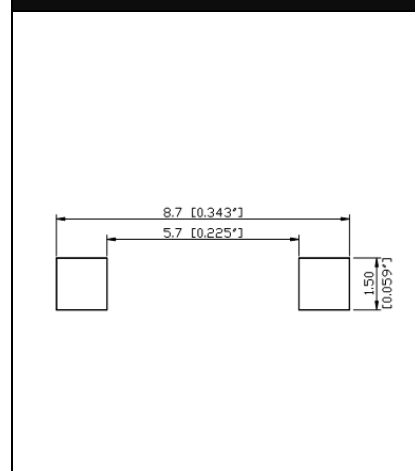
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R12S20	Red	625-635nm	20	2000	2.0	20	30
N0R12S19	Red	615-630nm	20	2400	2.0	20	30
N0Y12S22	Yellow	585-595nm	20	2875	2.0	20	30
N0G12S18	Green	565-576nm	20	520	2.0	20	30
N0B12S17	Blue	460-470nm	20	1300	3.1	20	30

Package Dimensions (mm)



Recommended Solder Pattern



Lead Frame

2421 Flat Type A



Features:

- Top View
- Low Power LED
- Various Colour
- Subminiature LED
- High Efficiency
- High Intensity Output
- Reel Packing

Applications:

- Indication Light
- Traffic Signal
- Information Board
- Decoration Lighting
- Signal and Switch

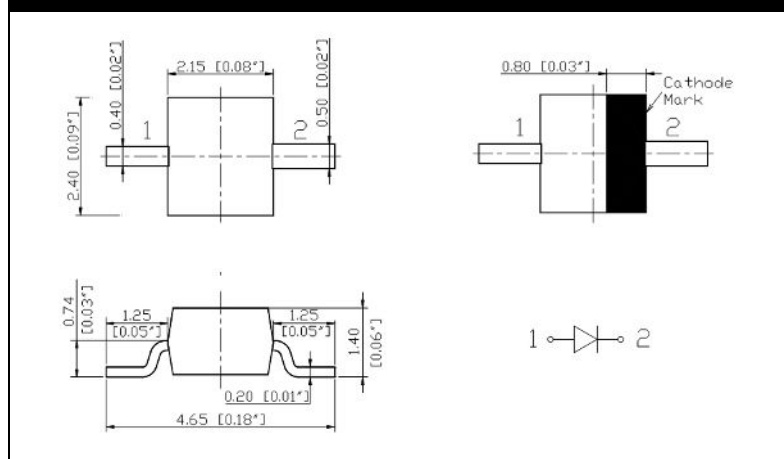
White Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W12S08	Sky White	5600-46500K	150	250	3.2	20	30

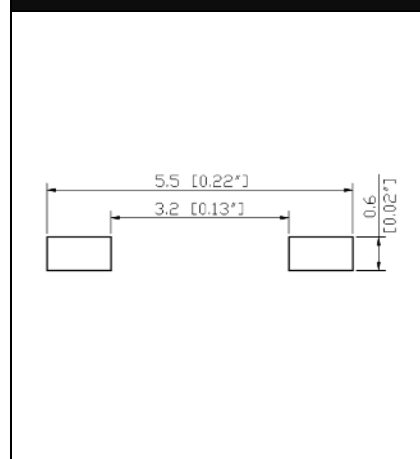
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R12S07	Red	625-635nm	150	95	2.0	20	30
N0Y12S09	Yellow	585-595nm	150	150	2.0	20	30
N0G12S05	Green	565-575nm	150	45	2.0	20	30
N0G12S06	Green	520-530nm	150	360	3.2	20	30
N0B12S04	Blue	460-470nm	150	50	3.1	20	30

Package Dimensions (mm)



Recommended Solder Pattern



Lead Frame

2421 Flat Type B



Features:

- Top View
- Low Power LED
- Various Colour
- Subminiature LED
- High Efficiency
- High Intensity Output
- Reel Packing

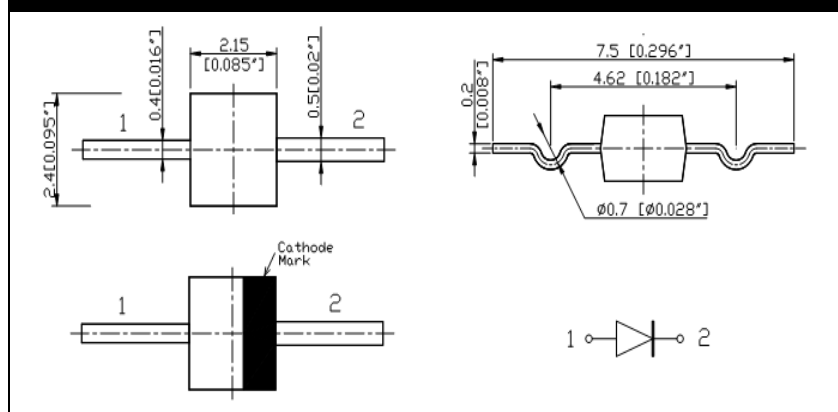
Applications:

- Indication Light
- Traffic Signal
- Information Board
- Decoration Lighting
- Signal and Switch

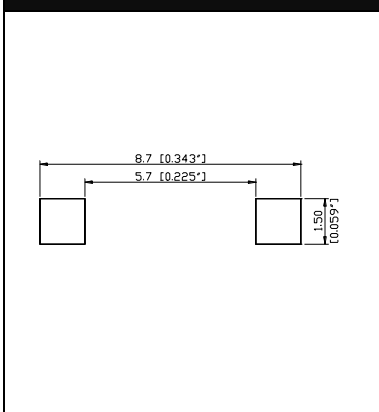
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R17S95	Red ■	615-630nm	150	120	2.0	20	30

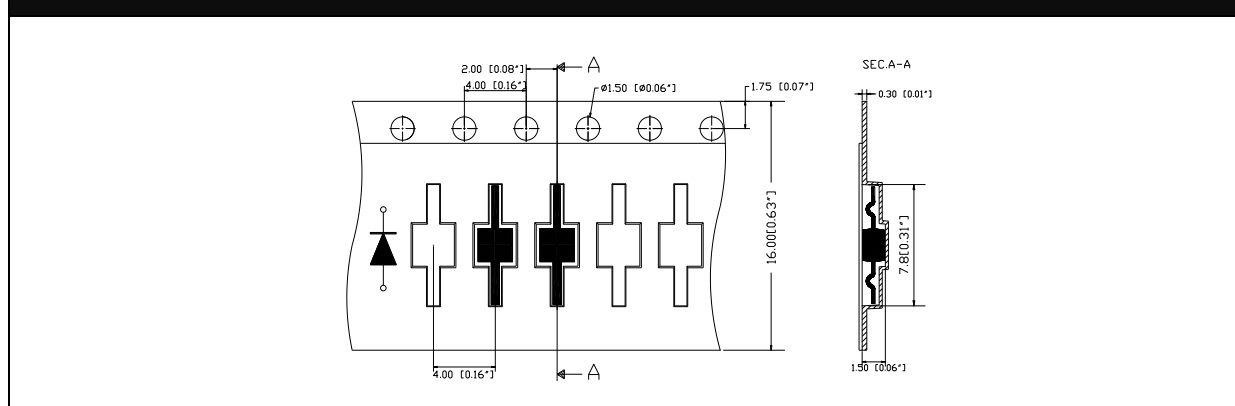
Package Dimensions (mm)



Recommended Solder Pattern



Packing Dimension



Lead Frame

2421 Flat Type C



Features:

- Top View
- Low Power LED
- Various Colour
- Subminiature LED
- High Efficiency
- High Intensity Output
- Reel Packing

Applications:

- Indication Light
- Traffic Signal
- Information Board
- Decoration Lighting
- Signal and Switch

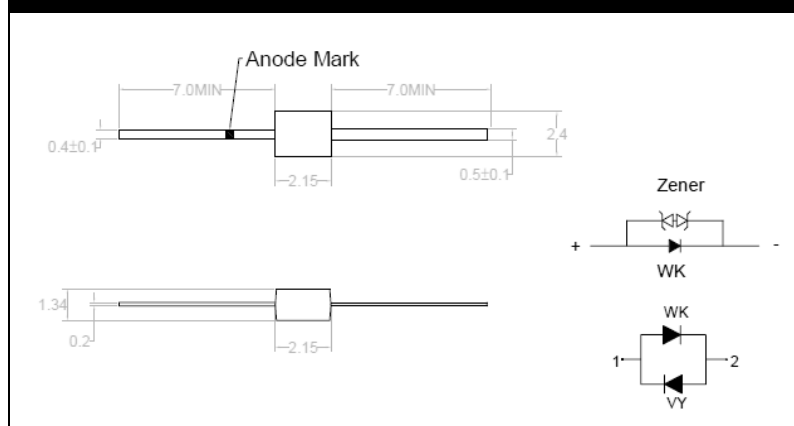
White Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W23S25Z	Sky White	7000-46500K	150	120	3.3	20	30

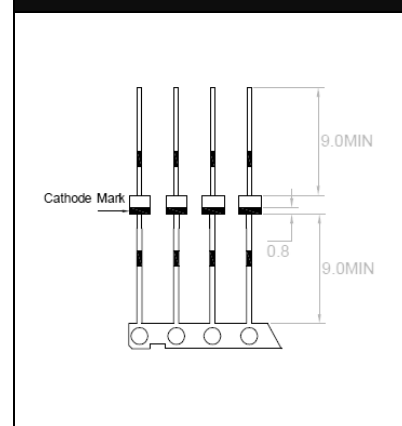
Dual Colours Electrical & Optical Characteristics

Order Code	Colour	CCT (K) / WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0D23S24	Cool White/Yellow	5000K/590nm	150	290/75	3.3/2.1	20/20

Package Dimensions (mm)



Packing Dimension



Lead Frame

2520 Type A



Features:

- Top View
- Low Power LED
- Small Viewing Angle
- Various Colour
- Subminiature LED
- High Efficiency
- High Intensity Output
- Reel Packing

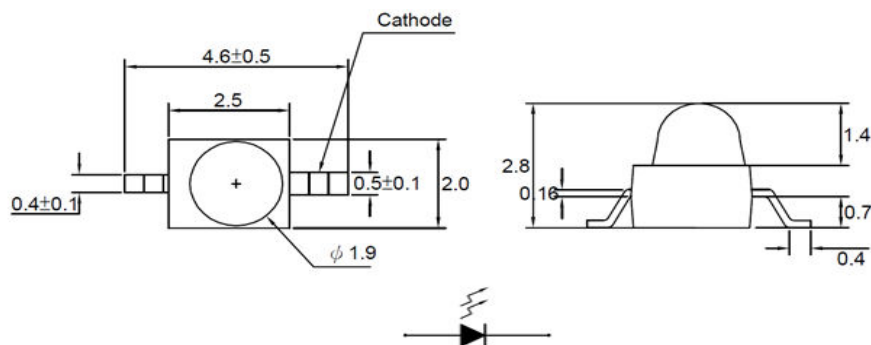
Applications:

- Indication Light
- Traffic Signal
- Information Board
- Decoration Lighting
- Signal and Switch

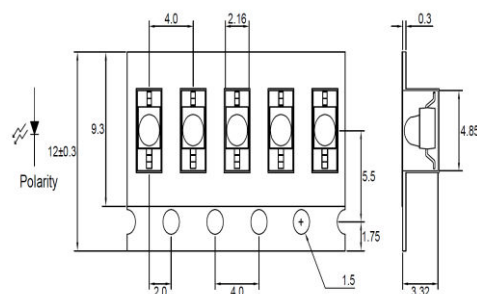
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR08S23	Red	627-640nm	20	2700	2.2	20	50
NOR08S17	Red	625-640nm	20	300	2.2	20	30
NOR08S18	Red	625-640nm	20	700	2.1	20	50
NOA08S14	Amber	595-610nm	20	1500	2.2	20	30
NOY08S20	Yellow	590-600nm	20	1800	2.2	20	30
NOY08S21	Yellow	590-600nm	20	900	2.2	20	50
NOG08S13	Green	570-580nm	20	450	2.2	20	25
NOG08S22	Green	520-535nm	20	1800	3.7	20	30
NOB08S15	Blue	465-480nm	20	300	3.7	20	30

Package Dimensions (mm)



Packing Dimension



Lead Frame

2520 Type B



Features:

- Top View
- Low Power LED
- Small Viewing Angle
- Various Colour
- Subminiature LED
- High Efficiency
- High Intensity Output
- Reel Packing

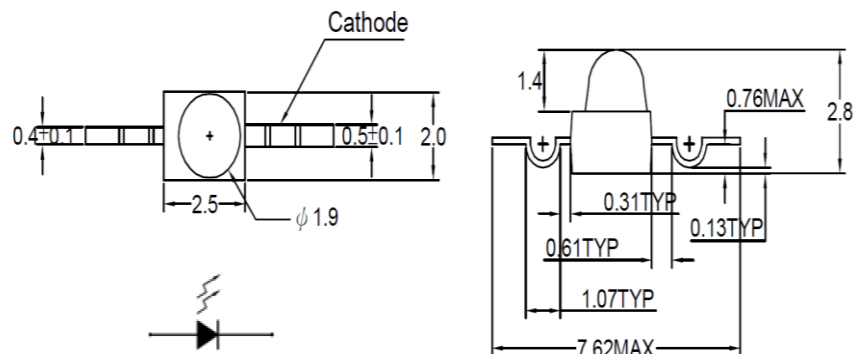
Applications:

- Indication Light
- Traffic Signal
- Information Board
- Decoration Lighting
- Signal and Switch

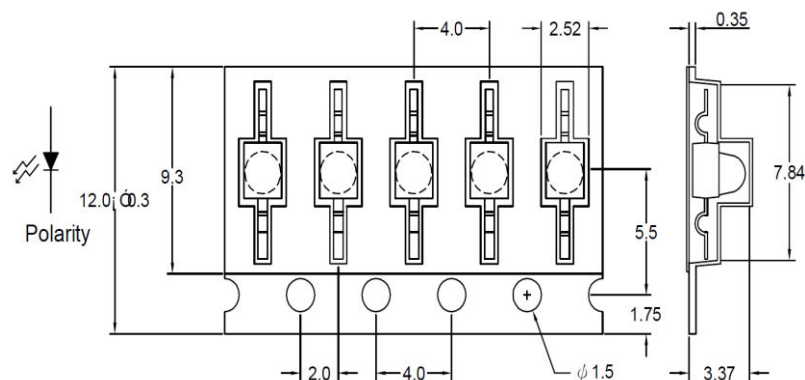
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR16S68	Red	620-640nm	20	2200	2.0	20	25
NOY23S28	Yellow	590-600nm	20	900	2.1	20	50
NOG23S26	Green	570-580nm	20	450	2.1	20	25
NOB23S27	Blue	460-480nm	20	300	3.5	20	30

Package Dimensions (mm)



Packing Dimension



Lead Frame

3022



Features:

- Top View
- Low Power LED
- Various Colour
- High Efficiency
- High Intensity Output
- Reel Packing

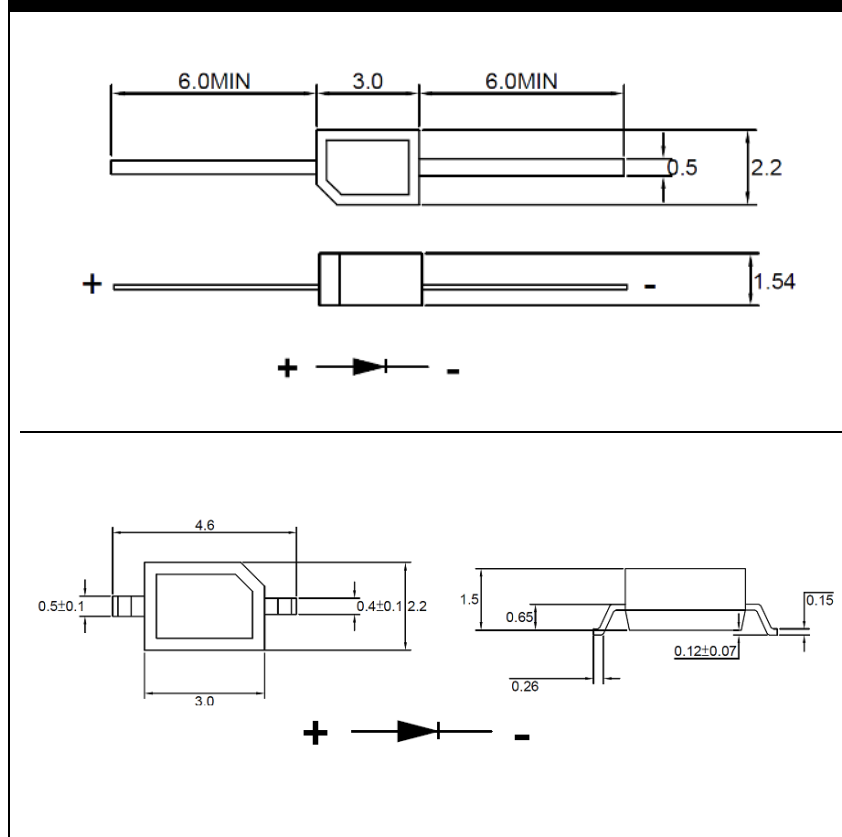
Applications:

- Indication Light
- Traffic Signal
- Information Board
- Decoration Lighting
- Signal and Switch

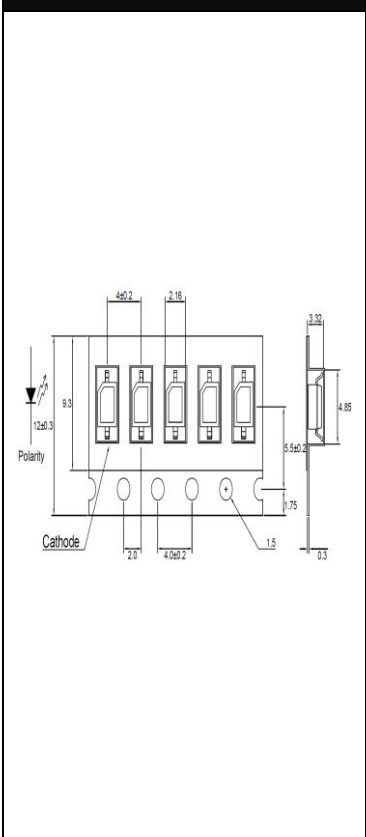
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR25S76	Red	620-640nm	120	300	1.9	20	30
N0A25S74	Amber	598-615nm	120	300	2.1	20	30
N0Y25S78	Yellow	585-595nm	85	40	2.2	20	30
N0G25S77	Green	560-570nm	85	20	2.1	20	30
N0B25S75	Blue	460-480nm	120	300	3.5	20	30

Package Dimensions (mm)



Packing Dimension



Lead Frame

3228 RGB



Features:

- Top View
- Low Power LED
- Multi-Colour
- High Efficiency
- High Intensity Output
- Reel Packing

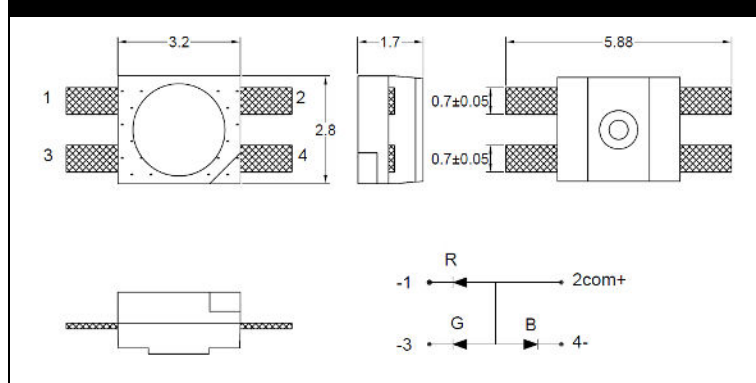
Applications:

- Indication Light
- Traffic Signal
- Information Board
- Decoration Lighting
- Signal and Switch

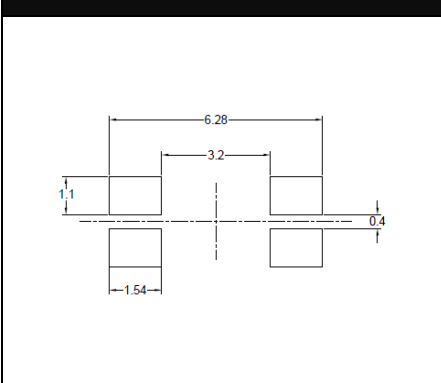
Colour Electrical & Optical Characteristics

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
NOM25S7	Red/Green/Blue 	625/525/465	120	110/400/110	1.8/2.7/2.8	2/2/2

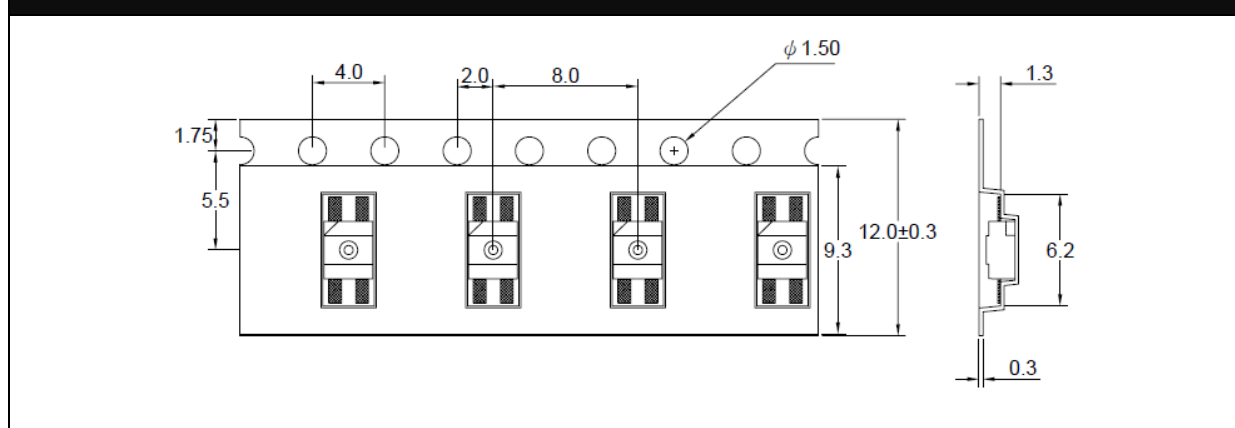
Package Dimensions (mm)



Recommended Solder Pattern



Packing Dimension



Side View

Side View	
- 0602SV	81-82
- 0802SV	83
- 1204SV	84-89
- 2812SV	90
- 3812SV	91

PCB Side View

0602SV (1606) 1.1t



Features:

- Side View
- Low Power LED
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Decorative Lighting
- 3C Consumer Goods
- Light Strip
- Indication Lamp

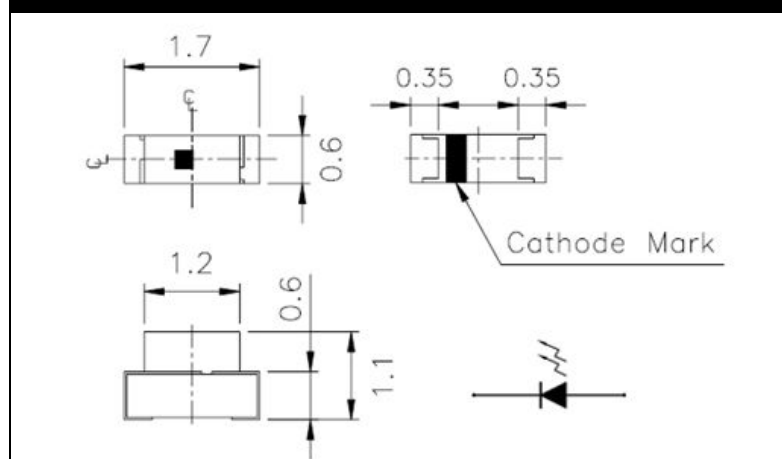
Electrical & Optical Characteristics (typ. at 5mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W03S06SV	Sky White	6300-27100K	140	85	2.8	5	25

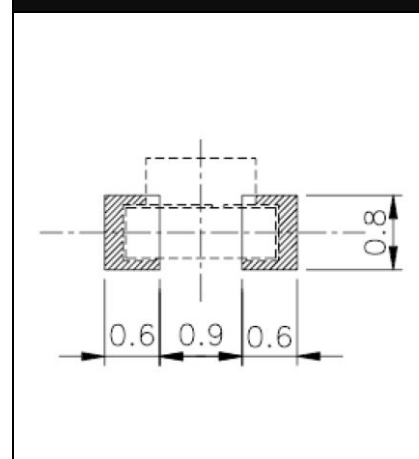
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R03S04SV	Red	620-645nm	130	45	2.0	20	25
N0R03S07SV	Red	620-634nm	140	85	2.2	20	30
N0A03S05SV	Amber	605-613nm	130	50	2.1	20	25
N0Y03S08SV	Yellow	585-595nm	130	85	2.1	20	25
N0G03S01SV	Green	568-576nm	130	30	2.0	20	25
N0G03S03SV	Green	520-535nm	130	200	3.2	20	25
N0B03S02SV	Blue	465-477nm	130	50	3.2	20	25

Package Dimensions (mm)



Recommended Solder Pattern



PCB Side View

0602SV (1606) 1.2t



Features:

- Side View
- Low Power LED
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Decorative Lighting
- 3C Consumer Goods
- Light Strip
- Indication Lamp

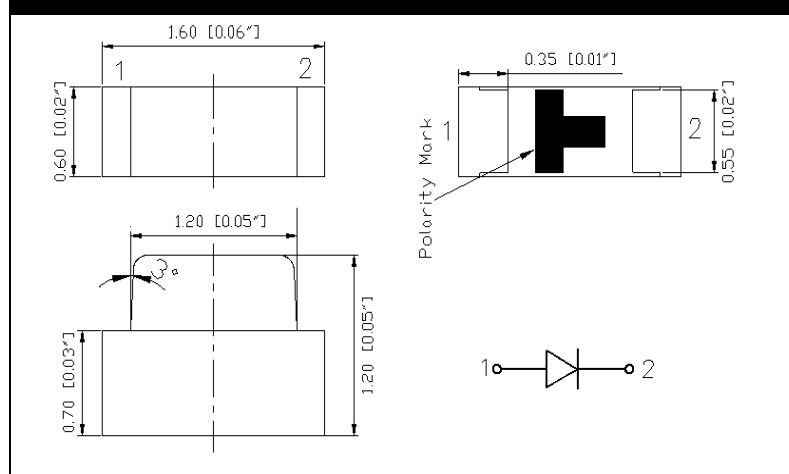
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W19S86SV	Sky White	5600-29500K	140	250	3.1	20	30

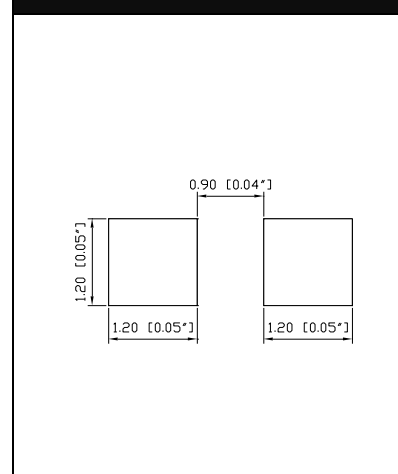
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R19S85SV	Red	615-630nm	140	130	2.0	20	30
N0A19S81SV	Amber	600-610nm	140	165	2.0	20	30
N0Y19S87SV	Yellow	585-595nm	140	150	2.0	20	30
N0G19S83SV	Green	565-576nm	140	35	2.0	20	30
N0G19S84SV	Green	520-530nm	140	590	3.3	20	30
N0B19S82SV	Blue	460-470nm	140	112	3.3	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PCB Side View

0802SV (2106)



Features:

- Side View
- Low Power LED
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

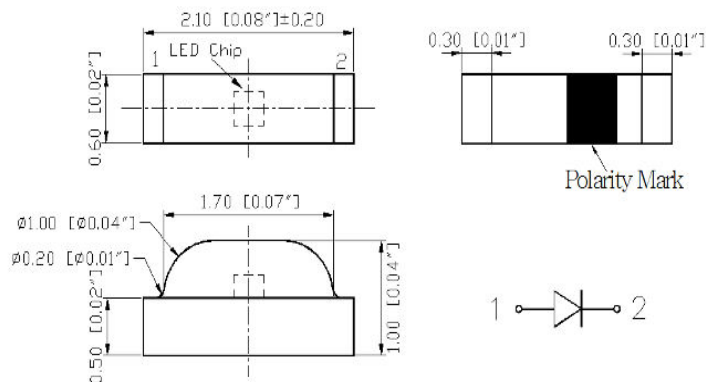
Applications:

- Commercial Lighting
- Decorative Lighting
- 3C Consumer Goods
- Light Strip
- Indication Lamp

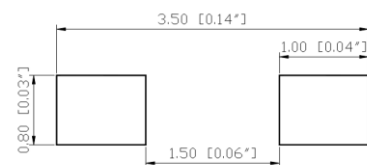
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	2θ _{1/2} (°)	I _V (mcd)	V _F (V)	I _F (mA)	I _{MAX} (mA)
NOR11S66SV	Red 	625-635nm	150	85	2.1	20	30
NOR11S65SV	Red 	615-630nm	150	140	2.0	20	30
NOY11S67SV	Yellow 	585-595nm	150	55	2.0	20	30
NOG11S64SV	Green 	565-576nm	150	40	2.0	20	30
NOB11S63SV	Blue 	460-470nm	150	60	3.3	20	30

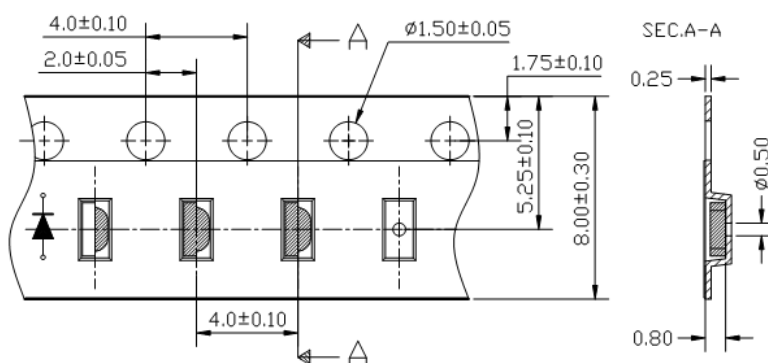
Package Dimensions (mm)



Recommended Solder Pattern



Packing Dimensions (mm)



PCB Side View

1204SV (3210) 1.4t



Features:

- Side View
- Low Power LED
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Decorative Lighting
- 3C Consumer Goods
- Light Strip
- Indication Lamp

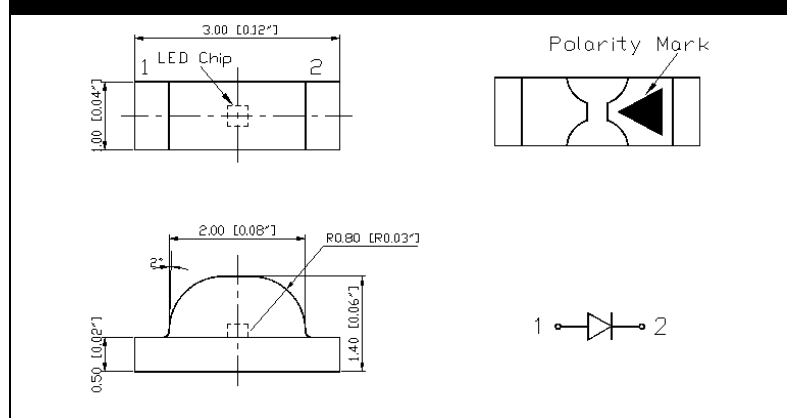
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W12S35SV	Sky White	5600-46500K	150	255	3.1	20	30

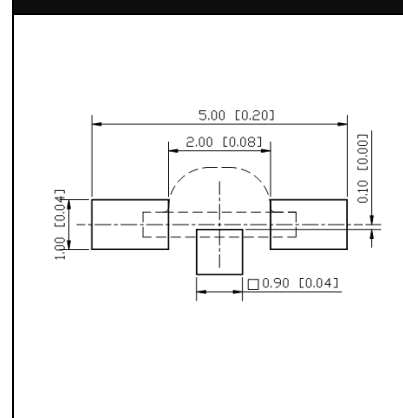
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR12S34SV	Red	625-635nm	150	85	2.0	20	30
NOR17S88SV	Red	625-635nm	150	95	2.0	20	30
NOR12S33SV	Red	620-630nm	150	65	2.0	20	30
N0Y12S36SV	Yellow	585-595nm	150	110	2.0	20	30
N0G12S32SV	Green	565-576nm	150	35	2.0	20	30
N0B12S31SV	Blue	460-470nm	150	65	3.1	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PCB Side View

1204SV (3210) 1.4t



Features:

- Side View
- Low Power LED
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Decorative Lighting
- 3C Consumer Goods
- Light Strip
- Indication Lamp

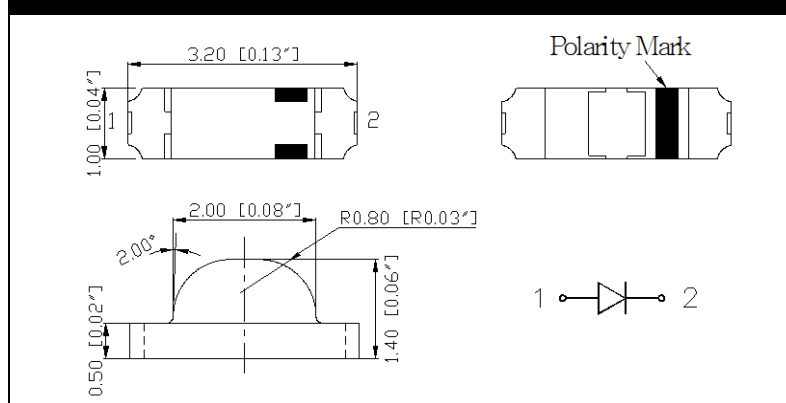
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W11S78SV	Sky White	5600-46500K	150	260	3.2	20	30

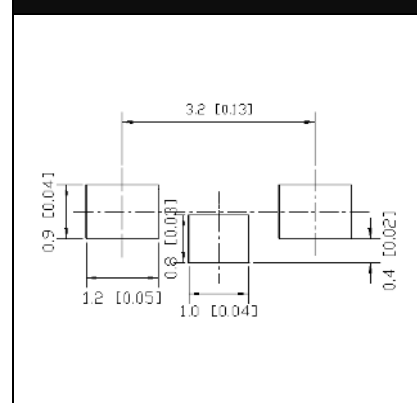
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R11S77SV	Red	625-635nm	150	85	2.0	20	30
N0R11S76SV	Red	615-630nm	150	142	2.0	20	30
N0Y11S79SV	Yellow	585-595nm	150	110	2.0	20	30
N0G11S74SV	Green	565-576nm	150	40	2.0	20	30
N0G11S75SV	Green	520-530nm	150	370	3.2	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PCB Side View

1204SV (3210) 1.5t



Features:

- Side View
- Low Power LED
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Decorative Lighting
- 3C Consumer Goods
- Light Strip
- Indication Lamp

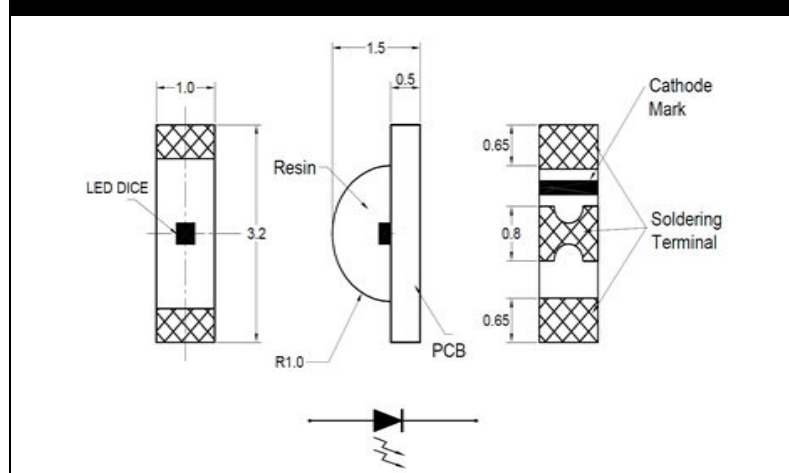
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W02S83SV	Sky White	4800-6400K	178	350	3.2	20	25

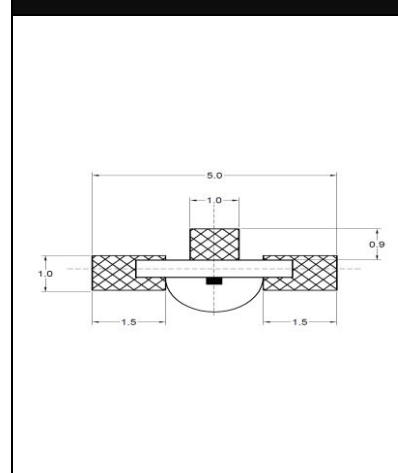
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R06S36SV	Red	620-650nm	110	125	1.9	20	30
N0R02S79SV	Red	620-636nm	120	80	2.1	20	30
N0A02S74SV	Amber	595-610nm	130	150	2.2	20	30
N0Y02S81SV	Yellow	590-600nm	120	125	2.2	20	30
N0Y06S37SV	Yellow	585-595nm	130	60	2.0	20	25
N0G02S75SV	Green	570-576nm	120	50	2.2	20	30
N0G02S77SV	Green	520-534nm	120	500	3.2	20	30
N0B02S76SV	Blue	465-475nm	120	125	3.2	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PCB Side View

1204SV (3210) 2.0t



Features:

- Side View
- Low Power LED
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

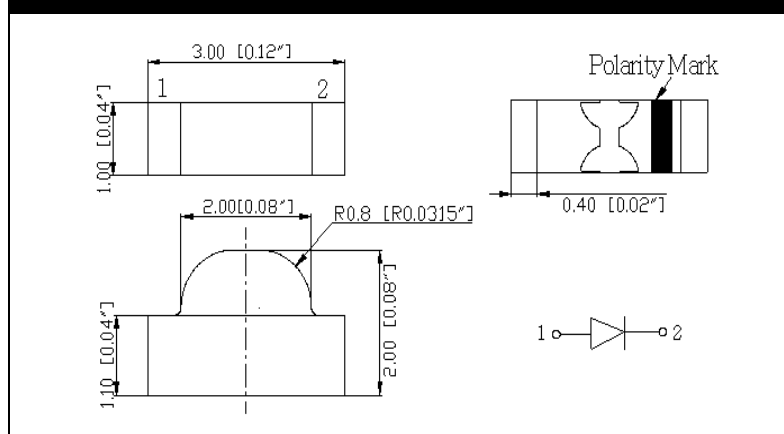
Applications:

- Commercial Lighting
- Decorative Lighting
- 3C Consumer Goods
- Light Strip
- Indication Lamp

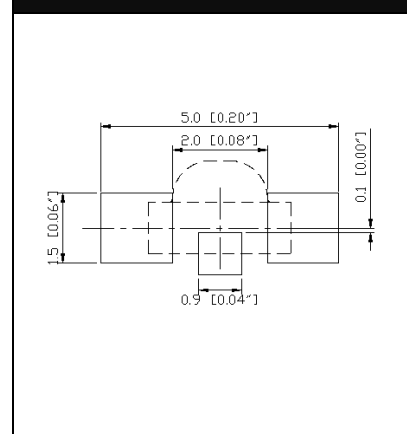
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR11S72SV	Red	625-635nm	150	85	2.0	20	30
NOR11S71SV	Red	615-630nm	150	140	2.1	20	30
NOY11S73SV	Yellow	585-595nm	150	170	2.1	20	30
NOG11S69SV	Green	565-576nm	150	40	2.0	20	30
NOG11S70SV	Green	520-530nm	150	370	3.2	20	30
NOB11S68SV	Blue	465-475nm	150	100	3.3	20	30

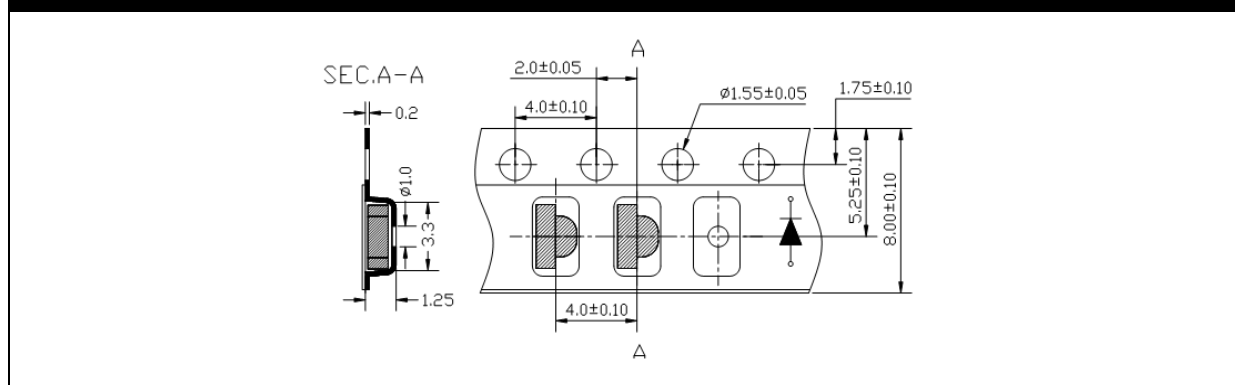
Package Dimensions (mm)



Recommended Solder Pattern



Packing Dimensions (mm)



PCB Side View

1204SV (3210) Dual Colours / RGB



Features:

- Side View
- Low Power LED
- Dual Colours / RGB
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

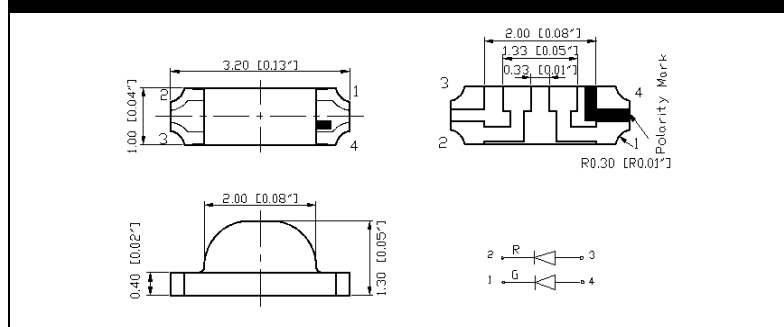
Applications:

- Commercial Lighting
- Decorative Lighting
- 3C Consumer Goods
- Light Strip
- Indication Lamp

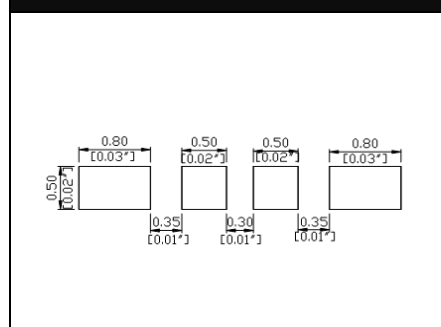
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K) / WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0D11S42SV	Red/Green	630/570nm	150	110/35	2.0/2.0	20/20
N0D11S44SV	Red/Yellow	640/590nm	150	85/170	2.0/2.0	20/20
N0D11S43SV	Yellow/Green	590/570nm	150	160/45	2.0/2.0	20/20

Package Dimensions (mm)



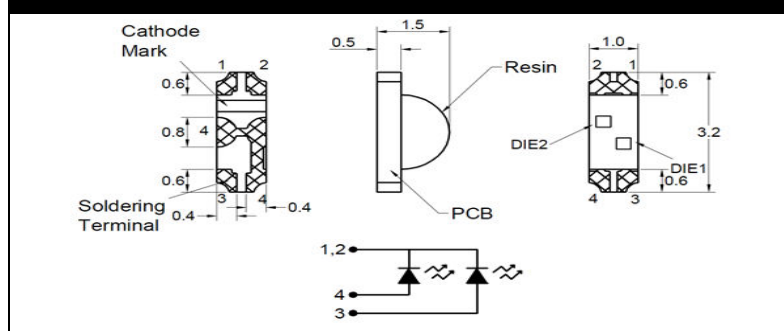
Recommended Solder Pattern



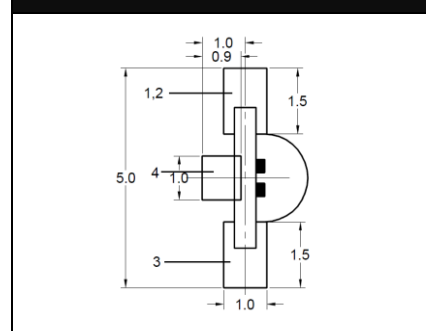
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K) / WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0D02S78SV	Red/Green	630/573nm	120	70/40	2.1/2.2	20/20
N0D02S80SV	Red/Blue	630/470nm	120	70/50	2.1/3.5	20/20
N0D23S19SV	Sky White/Amber	10900K/605nm	120	380/170	3.2/2.1	20/20
N0D23S20SV	Sky White/Yellow	10500K/590nm	120	350/80	3.2/2.1	20/20

Package Dimensions (mm)



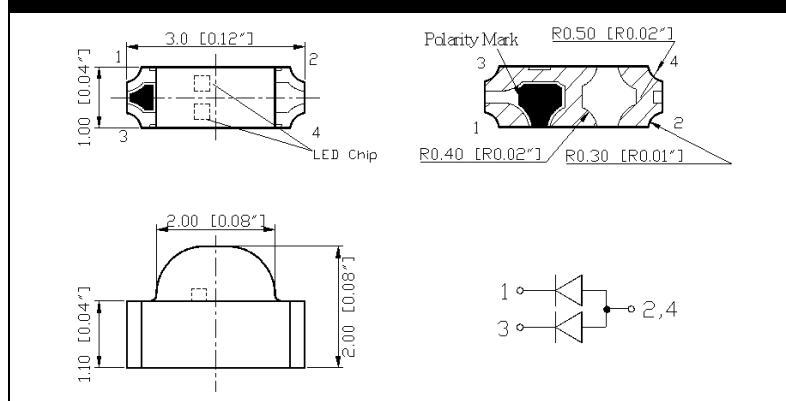
Recommended Solder Pattern



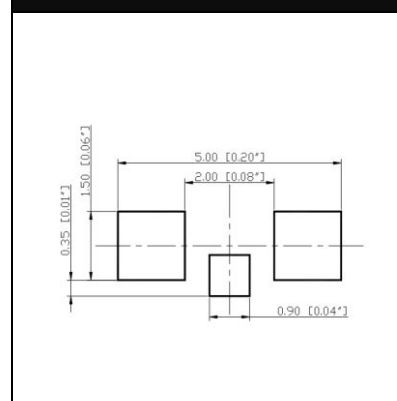
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour		CCT (K) / WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0D11S95SV	Amber/Blue		605/465nm	150	195/80	2.0/3.2	20/20
N0D11S94SV	Red/Green		640/520nm	150	75/500	2.0/3.3	20/20
N0D11S96SV	Red/Green		620/525nm	150	190/570	2.0/3.1	20/20
N0D11S97SV	Red/Green		620/570nm	150	90/40	2.0/2.0	20/20

Package Dimensions (mm)



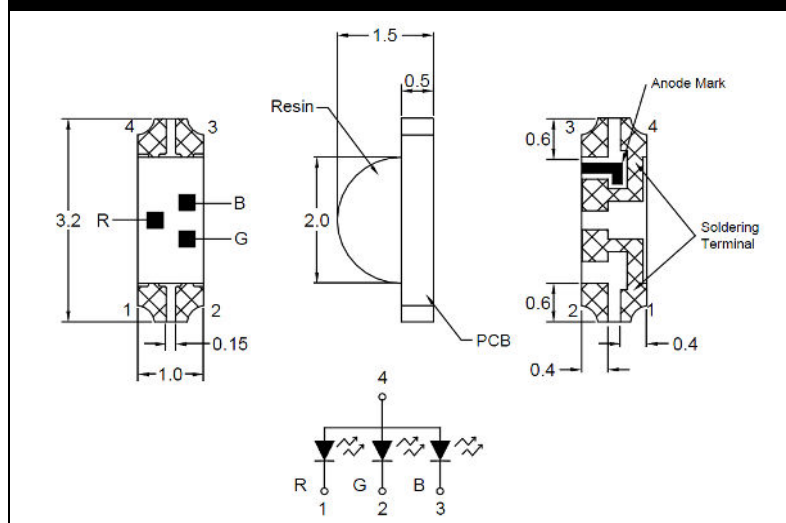
Recommended Solder Pattern



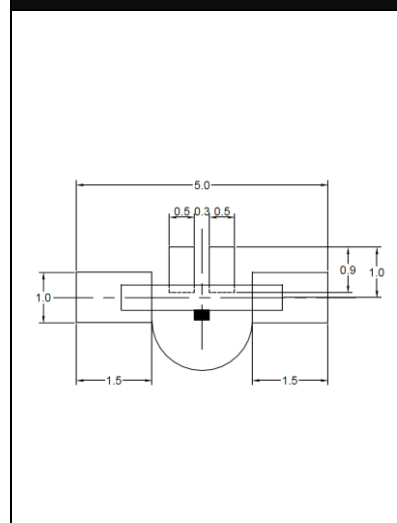
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour		WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)
N0M02S82SV	Red/Green/Blue		630/525/470nm	120	150/550/150	2.0/3.2/3.2	20/20/20

Package Dimensions (mm)



Recommended Solder Pattern



PLCC Side View

2812SV



Features:

- Side View
- Low Power LED
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Decorative Lighting
- 3C Consumer Goods
- Light Strip
- Indication Lamp

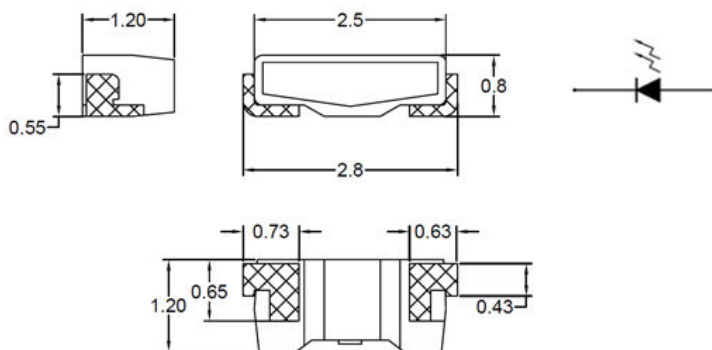
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W02S69SV	Cool White	5600-7300K	115	1900	3.2	20	30
N0W18S89SV	Cool White	5600-7300K	115	1900	3.2	20	30

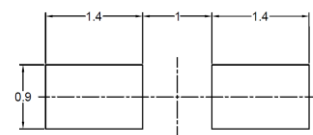
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R02S68SV	Red	620-636nm	115	80	2	20	30
N0Y23S16SV	Yellow	580-600nm	115	500	2.1	20	30
N0Y23S12SV	Yellow	580-600nm	115	70	2.1	20	30
N0G14S23SV	Green	519-528nm	115	1600	3.2	20	30
N0B02S67SV	Blue	465-477nm	115	260	3.2	20	30

Package Dimensions (mm)



Recommended Solder Pattern



PLCC Side View

3812SV



Features:

- Side View
- Low Power LED
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Commercial Lighting
- Decorative Lighting
- 3C Consumer Goods
- Light Strip
- Indication Lamp

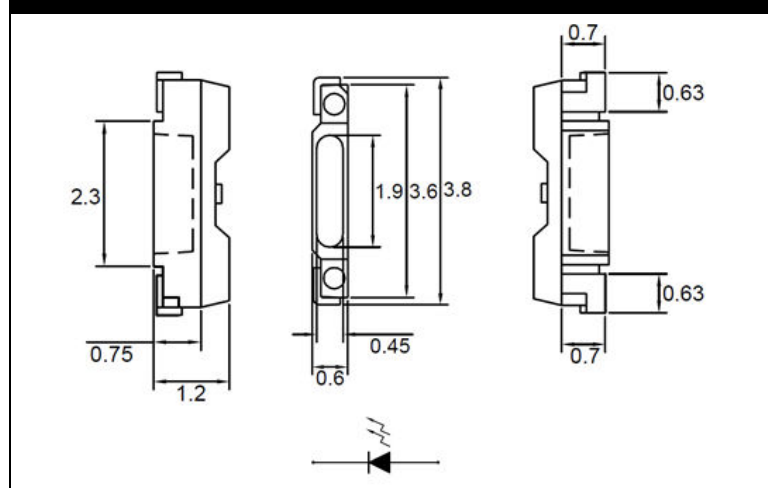
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W01S85SV	Cool White	6000-9800K	110	1500	3.2	20	30

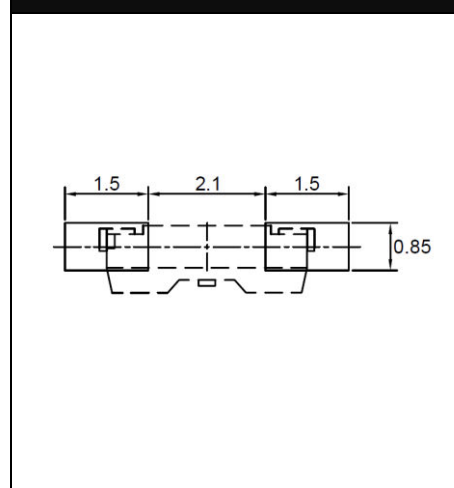
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR01S83SV	Red	620-625nm	120	320	2.1	20	30
NOY01S84SV	Yellow	585-595nm	120	400	2.2	20	30
N0G01S81SV	Green	568-576nm	120	32	2.1	20	25
N0G01S86SV	Green	520-531nm	120	500	3.2	20	30
N0B01S82SV	Blue	450-462nm	120	200	3.2	20	30

Package Dimensions (mm)



Recommended Solder Pattern



Reverse Mount

Reverse Mount	
- 1206RV (3216)	93
- 1209RV (3224)	94-95
- 2421RV	96-97
- 2520RV	98

PCB / CHIP LED

1206RV (3216)



Features:

- Reverse Mount
- Low Power LED
- Top View
- Various Colour
- Compatible Package
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Light Strip

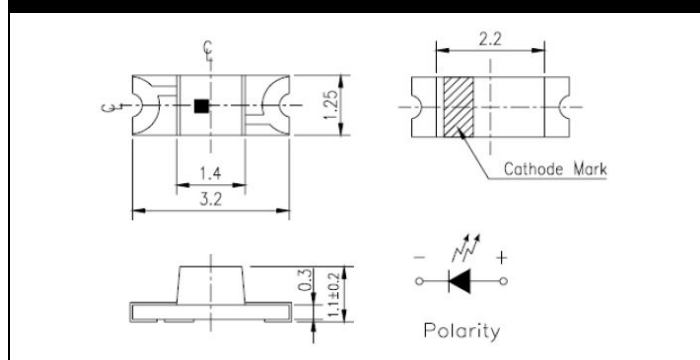
Electrical & Optical Characteristics

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W16S97RV	Sky White	6340-27100K	140	80	2.8	5	25
N0W19S61RV*	Sky White	5600-416000K	140	180	3.1	20	30

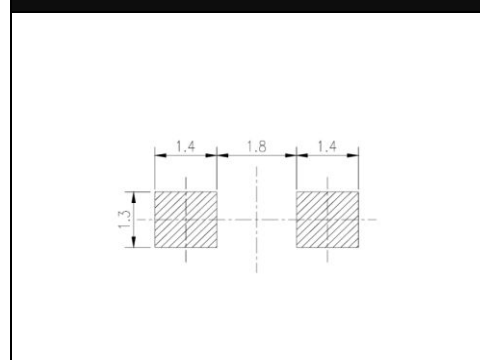
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R09S73RV	Red	617-634nm	130	50	2.0	20	25
N0Y09S74RV	Yellow	585-595nm	130	50	2.0	20	25
N0G09S75RV	Green	520-535nm	130	250	3.2	5	25
N0B13S94RV	Blue	465-475nm	130	35	3.2	5	25
N0B19S60RV*	Blue	460-470nm	140	120	3.2	20	30

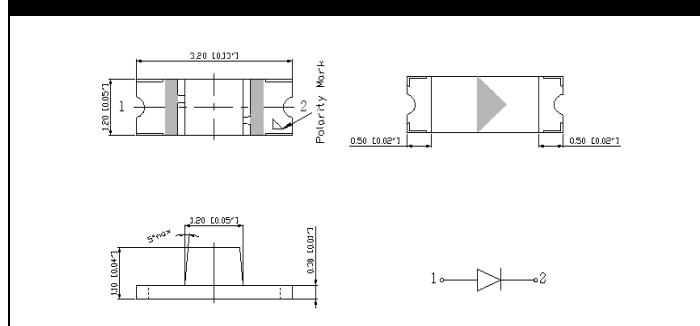
Package Dimensions (mm)



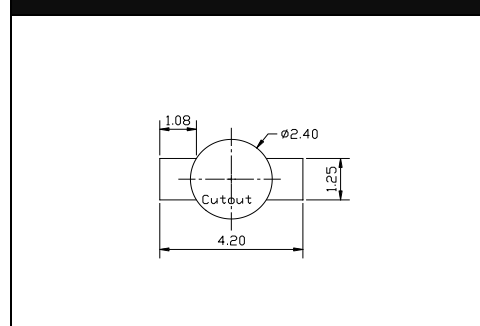
Recommended Solder Pattern



Package Dimensions (mm) *

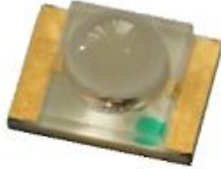


Recommended Solder Pattern *



PCB / CHIP LED

1209RV (3224)



Features:

- Reverse Mount
- Low Power LED
- Top View
- Narrow Viewing Angle
- Various Colour
- High Efficiency
- High Lumen Output
- Large Emitting Area

Applications:

- Indication Lamps
- Decoration Light
- 3C Consumer Goods
- Light Strip

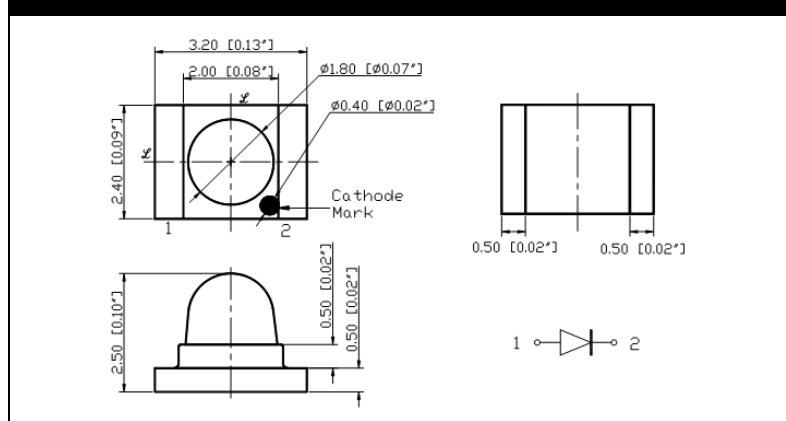
Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W10S62RV	Sky White	5600-46500K	130	140	3.1	20	30
N0W16S94RV	Sky White	5600-46500K	130	280	3.0	20	30

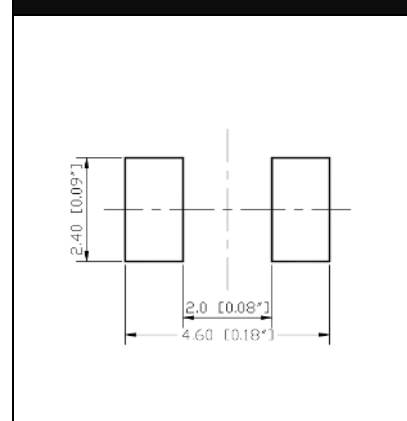
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0R10S61RV	Red	625-635nm	15	1600	2.0	20	30
N0R10S60RV	Red	620-630nm	15	3850	2.0	20	30
N0A16S95RV	Amber	600-610nm	15	3350	2.0	20	30
N0Y10S63RV	Yellow	585-595nm	15	3400	2.0	20	30
N0G10S56RV	Green	565-576nm	15	1000	2.0	20	30
N0G10S57RV	Green	520-530nm	15	8800	3.2	20	30
N0B10S55RV	Blue	460-470nm	15	1300	3.1	20	30

Package Dimensions (mm)



Recommended Solder Pattern



Lead Frame

2421RV



Features:

- Reverse Mount
- Low Power LED
- Small Viewing Angle
- Various Colour
- High Efficiency
- High Intensity Output
- Reel Packing

Applications:

- Indication Light
- Traffic Signal
- Information Board
- Decoration Lighting
- Signal and Switch

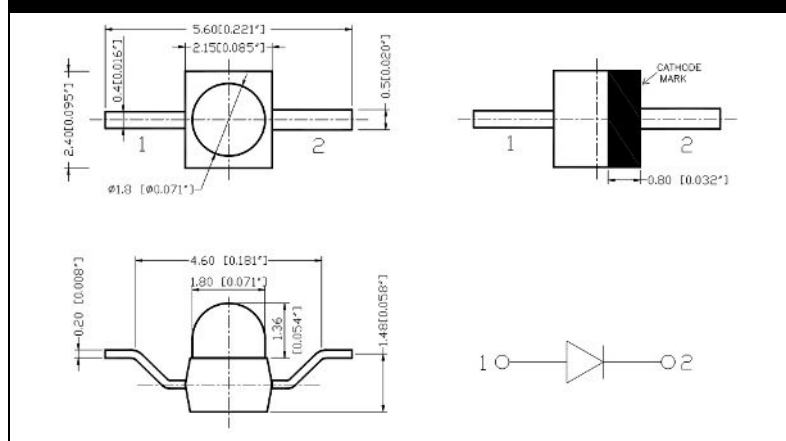
White Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	CCT (K)	$2\theta_{1/2}$ (°)	I_v (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
N0W12S15RV	Sky White	5600-46500K	150	380	3.2	20	30

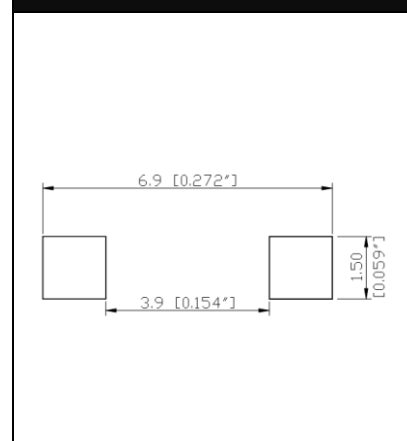
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_v (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR12S14RV	Red	625-635nm	20	2000	2.0	20	30
NOR12S13RV	Red	615-630nm	20	2400	2.0	20	30
NOY12S16RV	Yellow	585-595nm	20	2600	2.0	20	30
N0G12S11RV	Green	565-576nm	20	520	2.0	20	30
N0G12S12RV	Green	520-530nm	20	10000	3.2	20	30
N0B12S10RV	Blue	460-470nm	20	1300	3.1	20	30

Package Dimensions (mm)



Recommended Solder Pattern



Lead Frame

2421RV Flat



Features:

- Reverse Mount
- Low Power LED
- Small Viewing Angle
- Various Colour
- High Efficiency
- High Intensity Output
- Reel Packing

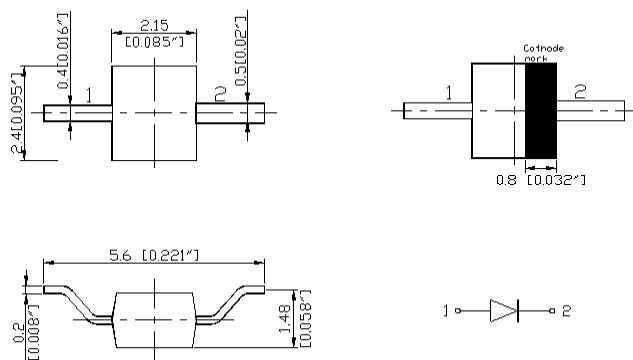
Applications:

- Indication Light
- Traffic Signal
- Information Board
- Decoration Lighting
- Signal and Switch

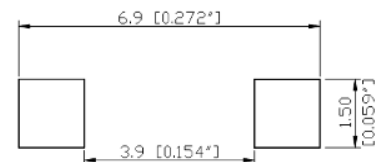
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR12S01RV	Red	625-635nm	150	95	2.0	20	30
NOR12S00RV	Red	615-630nm	150	120	2.0	20	30
NOY12S03RV	Yellow	585-595nm	150	150	2.0	20	30
NOG11S99RV	Green	565-575nm	150	45	2.0	20	30
NOB11S98RV	Blue	460-470nm	150	50	3.1	20	30

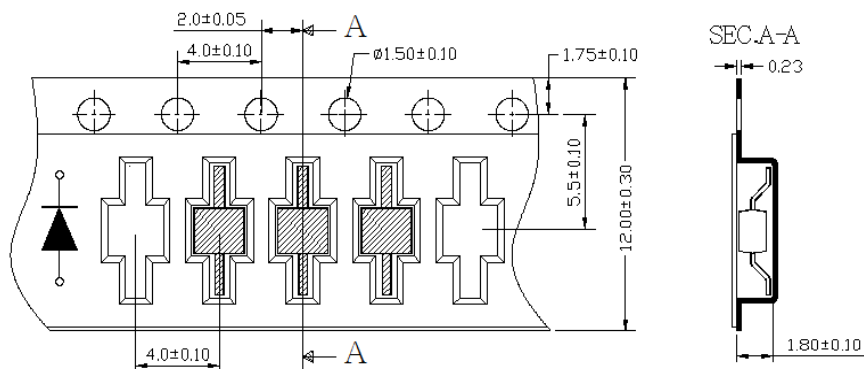
Package Dimensions (mm)



Recommended Solder Pattern



Packing Dimensions (mm)



Lead Frame

2520RV



Features:

- Reverse Mount
- Low Power LED
- Small Viewing Angle
- Various Colour
- High Efficiency
- High Intensity Output
- Reel Packing

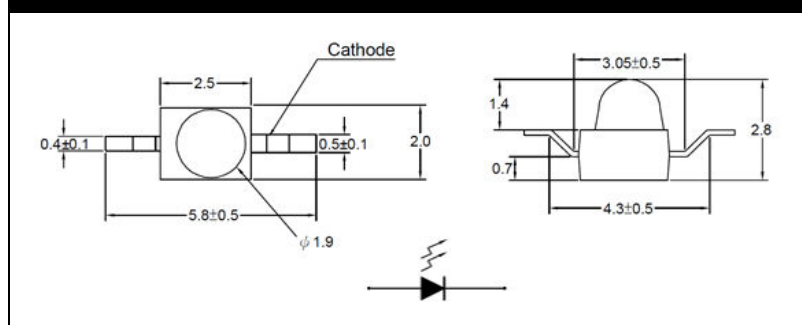
Applications:

- Indication Light
- Traffic Signal
- Information Board
- Decoration Lighting
- Signal and Switch

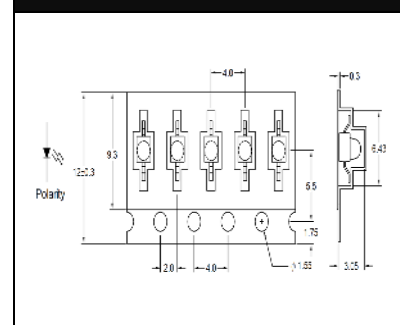
Colour Electrical & Optical Characteristics (typ. at 20mA)

Order Code	Colour	WL (nm)	$2\theta_{1/2}$ (°)	I_V (mcd)	V_F (V)	I_F (mA)	I_{MAX} (mA)
NOR06S51RV	Red	620-640nm	20	2700	2.2	20	50
NOR14S24RV	Red	620-640nm	20	2200	2.0	20	25
NOA23S23RV	Amber	600-610nm	20	2200	2.1	20	50
NOY06S52RV	Yellow	580-630nm	20	1100	2.2	20	50
NOG09S54RV	Green	570-574nm	20	450	2.2	20	30
NOG23S21RV	Green	520-530nm	20	1800	3.5	20	30
NOB23S22RV	Blue	460-480nm	20	220	3.5	20	30

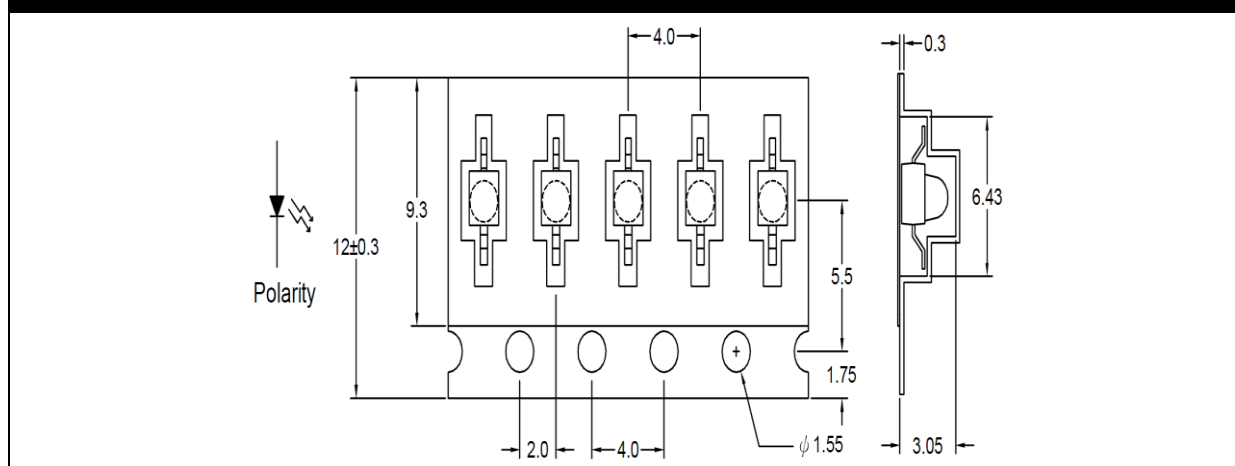
Package Dimensions (mm)



Packing Dimension



Packing Dimensions (mm)





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