

ELECTRICAL / OPTICAL CHARACTERISTICS at T_A=25°C

Parameter	Symbol	Emitting Color	Value			Unit
			Min.	Typ.	Max.	
Wavelength at Peak Emission I _F = 20mA	λ_{peak}	Hyper Red Green Super Bright Yellow	-	645 574 590	-	nm
Dominant Wavelength I _F = 20mA	$\lambda_{\text{dom}}^{[1]}$	Hyper Red Green Super Bright Yellow	620 560 580	630 570 590	640 576 600	nm
Spectral Bandwidth at 50% Φ REL MAX I _F = 20mA	$\Delta\lambda$	Hyper Red Green Super Bright Yellow	-	28 20 20	-	nm
Forward Voltage I _F = 20mA	V _F ^[2]	Hyper Red Green Super Bright Yellow	-	1.95 2.1 2.0	2.5 2.5 2.5	V
Reverse Current (V _R = 5V)	I _R	Hyper Red Green Super Bright Yellow	-	-	10 10 10	μA
Temperature Coefficient of λ_{peak} I _F = 20mA, -10°C ≤ T ≤ 85°C	TC _{λ_{peak}}	Hyper Red Green Super Bright Yellow	-	0.14 0.12 0.12	-	nm/°C
Temperature Coefficient of λ_{dom} I _F = 20mA, -10°C ≤ T ≤ 85°C	TC _{λ_{dom}}	Hyper Red Green Super Bright Yellow	-	0.05 0.08 0.07	-	nm/°C
Temperature Coefficient of V _F I _F = 20mA, -10°C ≤ T ≤ 85°C	TC _V	Hyper Red Green Super Bright Yellow	-	-1.9 -1.9 -1.9	-	mV/°C

Notes:

1. The dominant wavelength (λ_d) above is the setup value of the sorting machine. (Tolerance λ_d : ±1nm.)
2. Forward voltage: ±0.1V.
3. Wavelength value is traceable to CIE127-2007 standards.
4. Excess driving current and / or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

ABSOLUTE MAXIMUM RATINGS at T_A=25°C

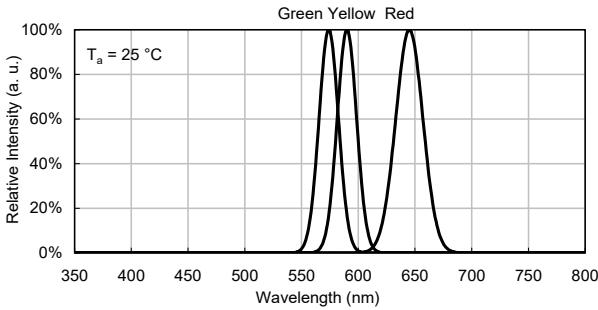
Parameter	Symbol	Value			Unit
		Hyper Red	Green	Super Bright Yellow	
Power Dissipation	P _D	75	75	75	mW
Reverse Voltage	V _R	5	5	5	V
Junction Temperature	T _j	115	115	115	°C
Operating Temperature	T _{op}	-40 to +85			°C
Storage Temperature	T _{stg}	-40 to +85			°C
DC Forward Current	I _F	30	30	30	mA
Peak Forward Current	I _{FP} ^[1]	185	150	175	mA
Electrostatic Discharge Threshold (HBM)	-	3000	3000	3000	V
Thermal Resistance (Junction / Ambient)	R _{th JA} ^[2]	610	710	790	°C/W
Thermal Resistance (Junction / Solder point)	R _{th JS} ^[2]	500	600	680	°C/W

Notes:

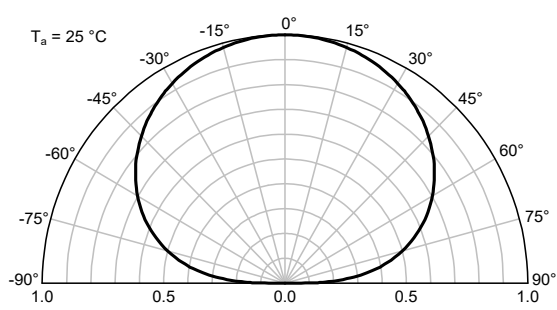
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. R_{th JA}, R_{th JS} Results from mounting on PC board FR4 (pad size ≥ 16 mm² per pad).
3. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A and JEDEC/J-STD-033.

TECHNICAL DATA

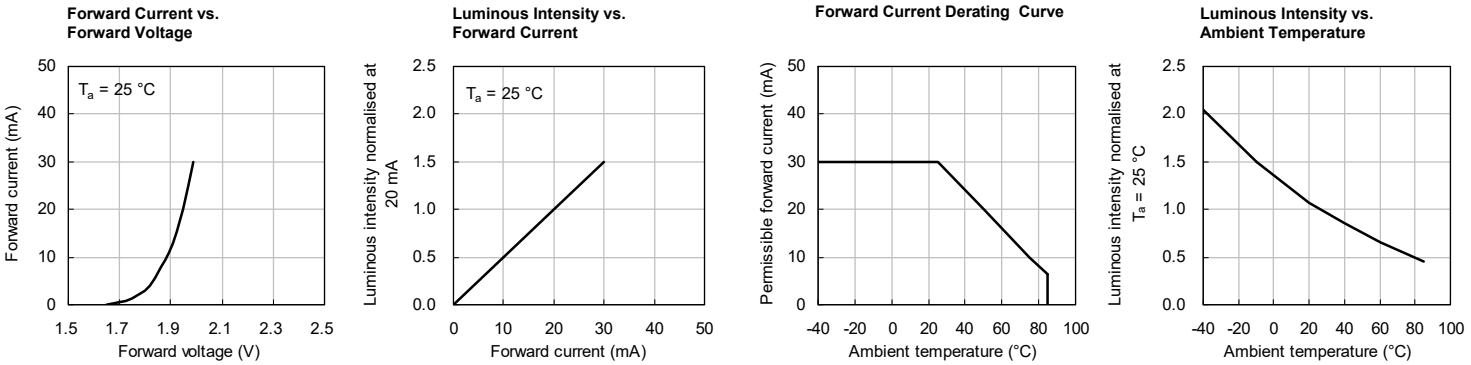
RELATIVE INTENSITY vs. WAVELENGTH



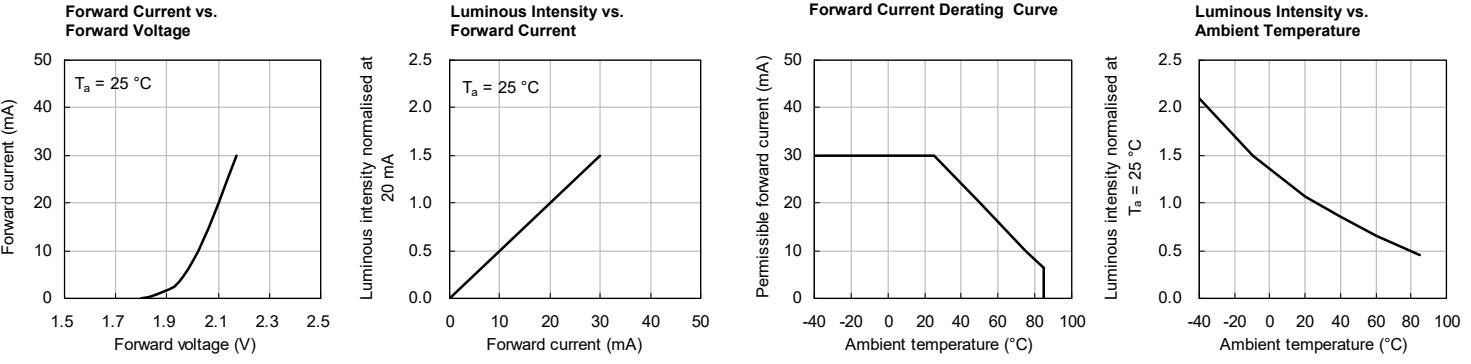
SPATIAL DISTRIBUTION



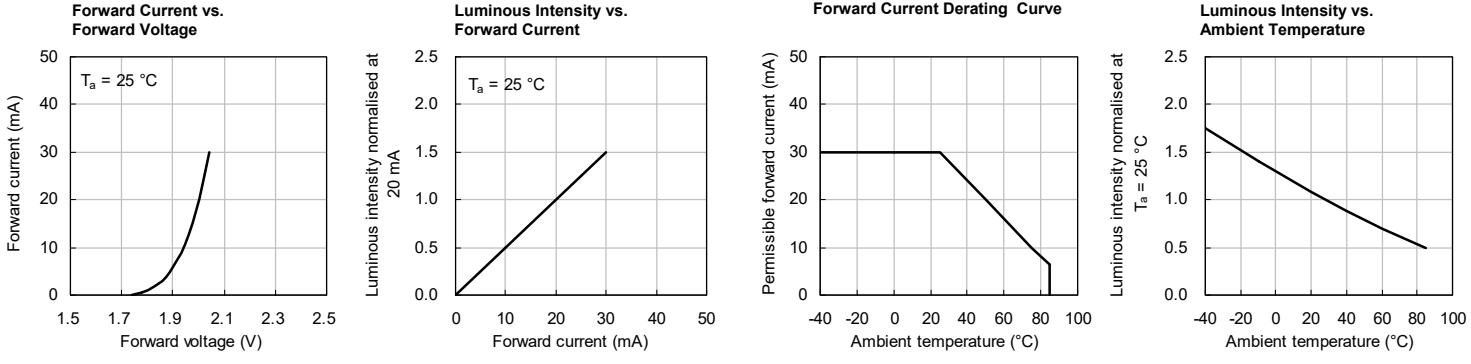
HYPER RED



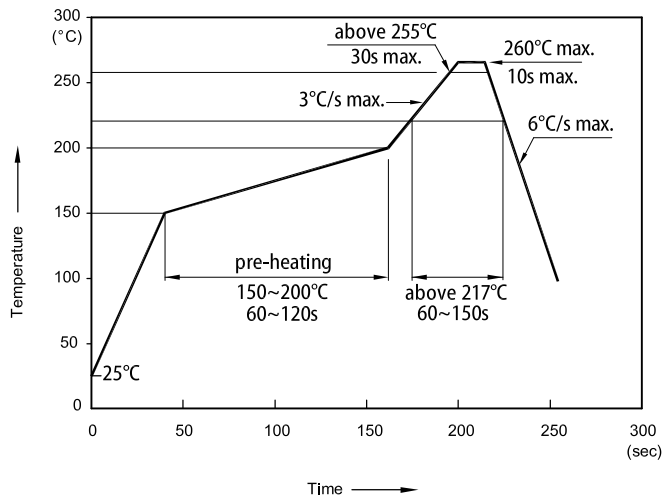
GREEN



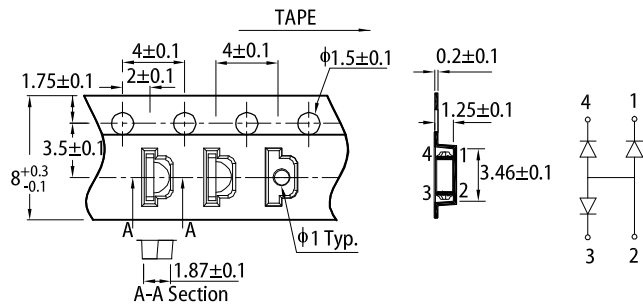
SUPER BRIGHT YELLOW



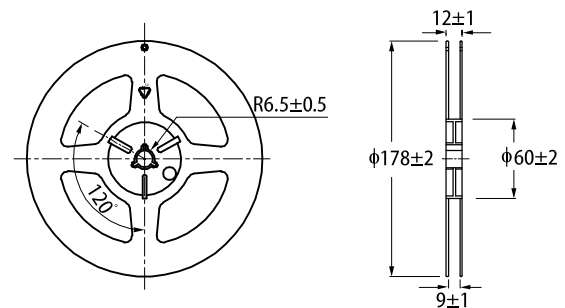
REFLOW SOLDERING PROFILE for LEAD-FREE SMD PROCESS



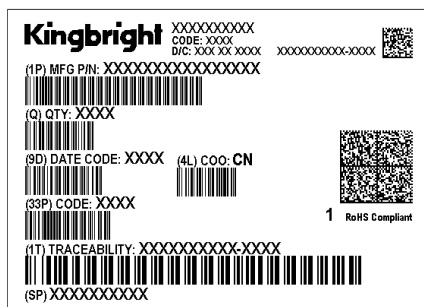
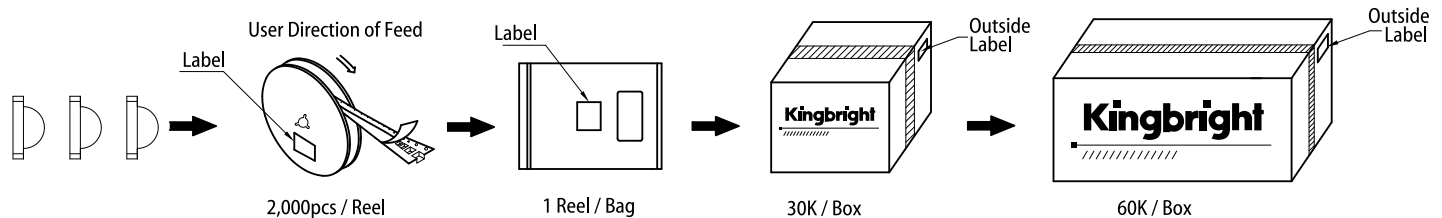
TAPE SPECIFICATIONS (units : mm)



REEL DIMENSION (units : mm)



PACKING & LABEL SPECIFICATIONS



PRECAUTIONARY NOTES

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