ELECTRICAL / OPTICAL CHARACTERISTICS at T_A=25°C

Parameter	Symbol	Emitting Color	Value		Unit
			Typ.	Max.	
Wavelength at Peak Emission I_F = 20mA	λ_{peak}	High Efficiency Red Super Bright Green	627 565	-	nm
Dominant Wavelength I_F = 20mA	λ_{dom} [1]	High Efficiency Red Super Bright Green	617 568	-	nm
Spectral Bandwidth at 50% Φ REL MAX I_F = 20mA	Δλ	High Efficiency Red Super Bright Green	45 30	-	nm
Capacitance	C	High Efficiency Red Super Bright Green	15 15	-	pF
Forward Voltage I_F = 20mA	V_F [2]	High Efficiency Red Super Bright Green	2.0 2.2	2.5 2.5	V
Reverse Current (V_R = 5V)	I_R	High Efficiency Red Super Bright Green	-	10 10	μA
Temperature Coefficient of λ_{peak} I_F = 20mA, -10°C ≤ T ≤ 85°C	$TC_{\lambda peak}$	High Efficiency Red Super Bright Green	0.13 0.12	-	nm/°C
Temperature Coefficient of λ_{dom} I_F = 20mA, -10°C ≤ T ≤ 85°C	$TC_{\lambda dom}$	High Efficiency Red Super Bright Green	0.06 0.08	-	nm/°C
Temperature Coefficient of V_F I_F = 20mA, -10°C ≤ T ≤ 85°C	TC_V	High Efficiency Red Super Bright Green	-1.9 -2.0	-	mV/°C

Notes:
1. The dominant wavelength (λd) above is the setup value of the sorting machine. (Tolerance λd : ±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.

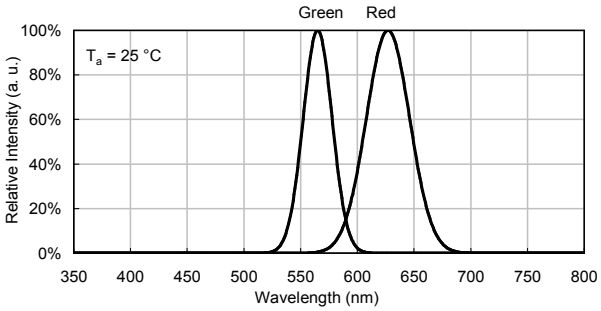
ABSOLUTE MAXIMUM RATINGS at T_A=25°C

Parameter	Symbol	Value		Unit
		High Efficiency Red	Super Bright Green	
Power Dissipation	P_D	75	62.5	mW
Reverse Voltage	V_R	5	5	V
Junction Temperature	T_J	125	110	°C
Operating Temperature	Top	-40 To +85		°C
Storage Temperature	Tstg	-40 To +85		°C
DC Forward Current	I_F	30	25	mA
Peak Forward Current	I_{FM} [1]	160	140	mA
Electrostatic Discharge Threshold (HBM)	-	8000	8000	V
Thermal Resistance (Junction / Ambient)	$R_{th\ JA}$ [2]	720	790	°C/W
Thermal Resistance (Junction / Solder point)	$R_{th\ JS}$ [2]	550	620	°C/W

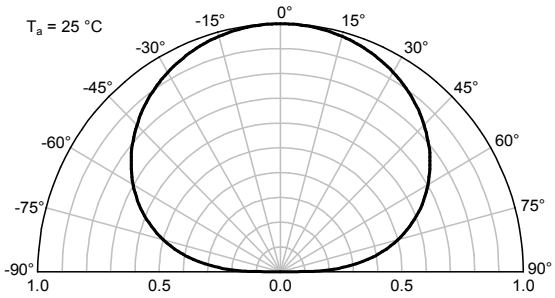
Notes:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. $R_{th\ JA}$,$R_{th\ JS}$ Results from mounting on PC board FR4 (pad size ≥ 16 mm^2 per pad).
3. Relative humidity levels maintained between 40% and 60% in production area are recommended to avoid the build-up of static electricity – Ref JEDEC/JESD625-A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

TECHNICAL DATA

RELATIVE INTENSITY vs. WAVELENGTH

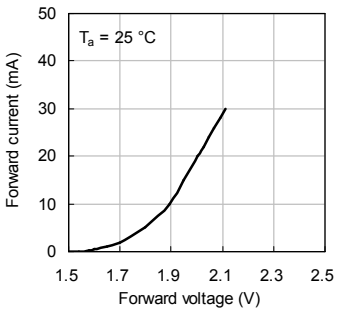


SPATIAL DISTRIBUTION

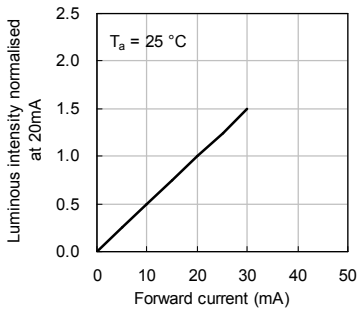


HIGH EFFICIENCY RED

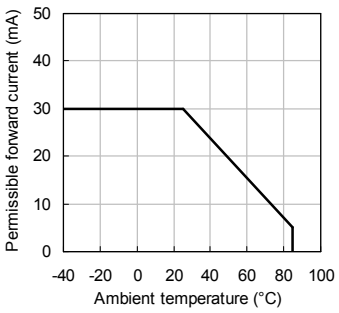
Forward Current vs. Forward Voltage



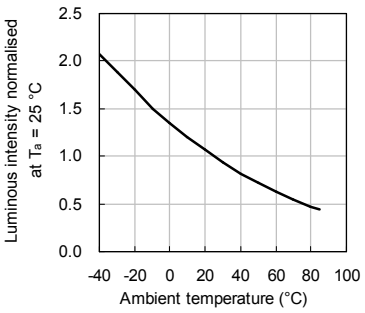
Luminous Intensity vs. Forward Current



Forward Current Derating Curve

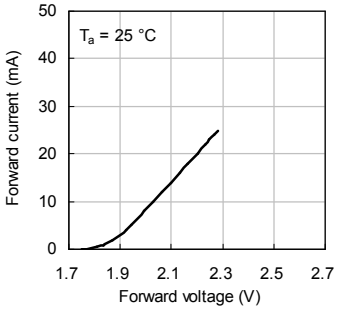


Luminous Intensity vs. Ambient Temperature

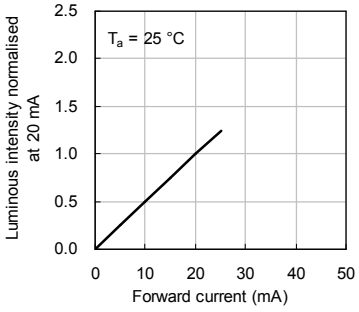


SUPER BRIGHT GREEN

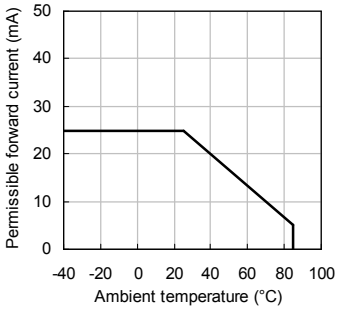
Forward Current vs. Forward Voltage



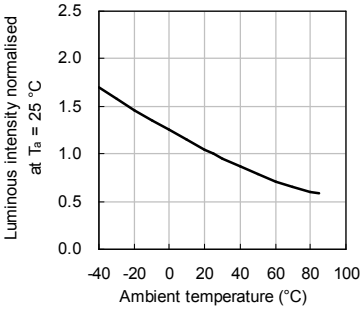
Luminous Intensity vs. Forward Current



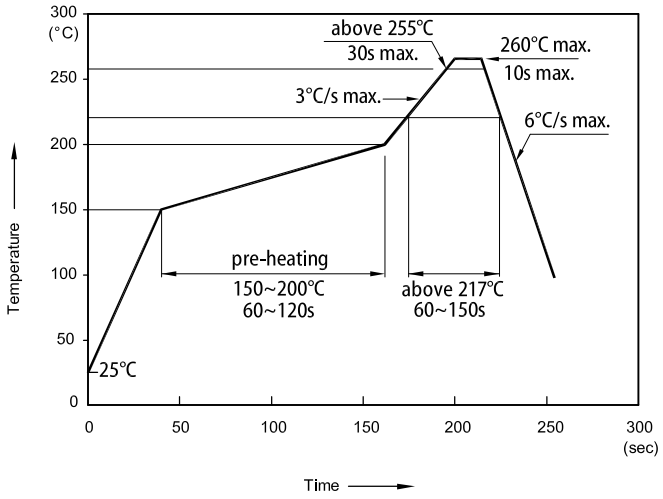
Forward Current Derating Curve



Luminous Intensity vs. Ambient Temperature

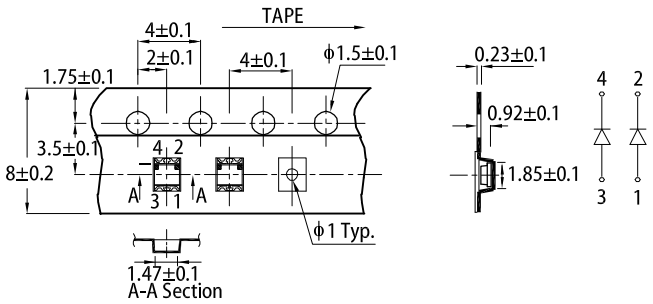


REFLOW SOLDERING PROFILE for LEAD-FREE SMD PROCESS

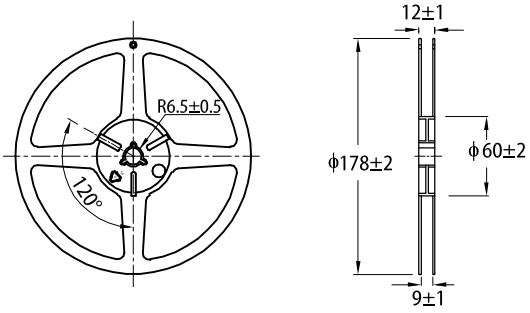


Notes:
1. Don't cause stress to the LEDs while it is exposed to high temperature.
2. The maximum number of reflow soldering passes is 2 times.
3. Reflow soldering is recommended. Other soldering methods are not recommended as they might cause damage to the product.

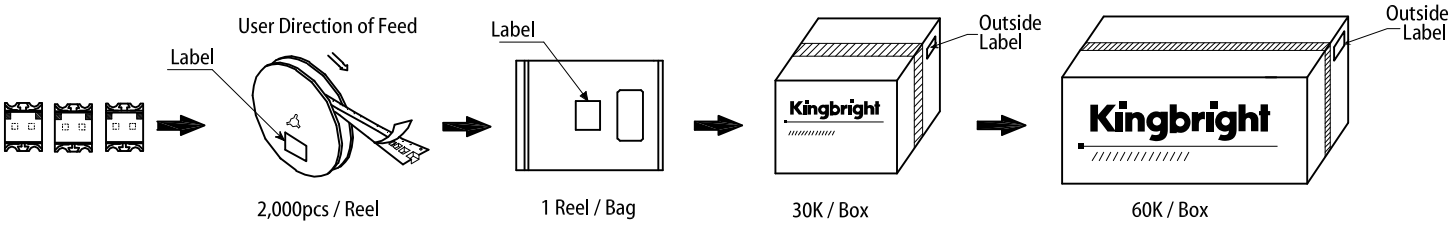
TAPE SPECIFICATIONS (units : mm)

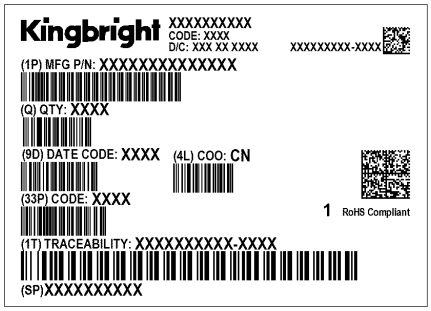


REEL DIMENSION (units : mm)



PACKING & LABEL SPECIFICATIONS





PRECAUTIONARY NOTES

1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.
2. The part number, type, and specifications mentioned in this document are subject to future change and improvement without notice. Before production usage customer should refer to the latest datasheet for the updated specifications.
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