SMD 3528 3in1 LED SPECIFICATIONS

Absolute Maximum Ratings

Item	Symbol	Absolute Maximum Rating			Unit
		Red	Green	Blue	
DC Forward Current	IF	30	30	30	mA
Pulse Forward Current	IFP	100	100	100	mA
Power Dissipation	P_D	65	100	100	mW
Reverse Voltage	VR	5			V
Operating Temperature	Topr	- 40 ~ + 105			℃
Storage Temperature	Tstg	- 40 ~ + 105			℃
Junction Temperature	Tj	115			℃
Soldering Temperature	Tsld	Reflow Soldering：260℃<10sec			
Allowable Reflow Cycles	-	3			

* IFP condition with Pulse: Width≤10ms, Duty cycle≤1/10.

* Suggest not driving RGB LED concurrently.

Electrical&Optical Characteristics at Ta=25℃

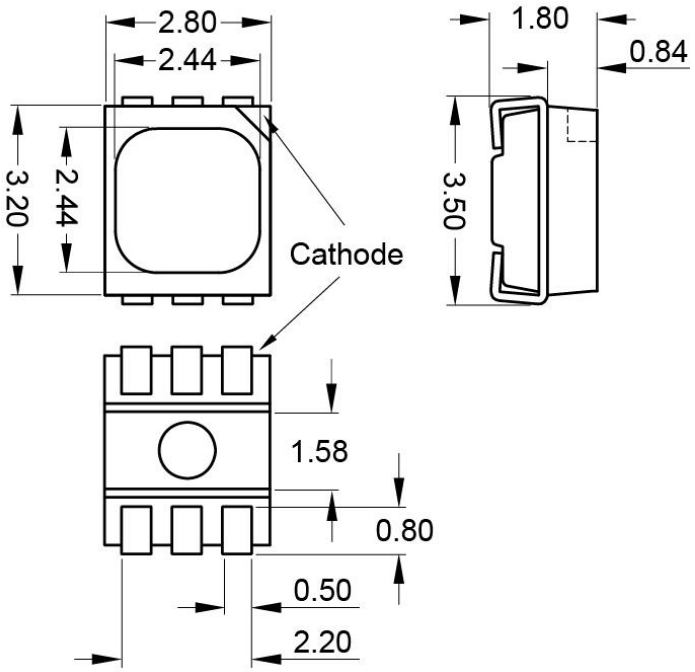
Item	Condition	Symbol		Min.	Typ.	Max.	Unit
Forward Voltage	I_F=20mA	V_{Fmax}	R	1.90	2.05	2.4	V
			G	2.8	3.1	3.3	
			B	2.8	3.0	3.3	
Luminous Flux	I_F=20mA	Φ_V	R	2.8	3.1	3.6	lm
			G	4.6	5.6	9.0	
			B	1.2	1.4	1.7	
Dominant Wavelength	I_F=20mA	λ_d	R	618	621	624	nm
			G	519	521	525	
			B	464	466	470	
Thermal resistance	I_F=20mA	(Rth $_{j-sp}$)		130 (R)	105 (G)	100 (B)	℃/W
View Angle	I_F=20mA	$2\theta_{1/2}$		120			°
Electrostatic Discharge	HBM	ESD		2000			V

* All data in this datasheet is driven respectively.

* The measurement of forward voltage maintains a tolerance of ± 0.05V， flux maintains a tolerance of ±4%.

* Wavelenght measurement tolerance is ± 2.5nm

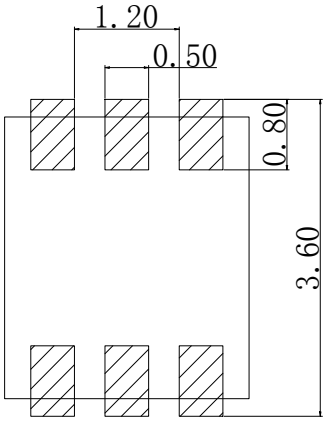
Package Dimensions (Unit: mm)



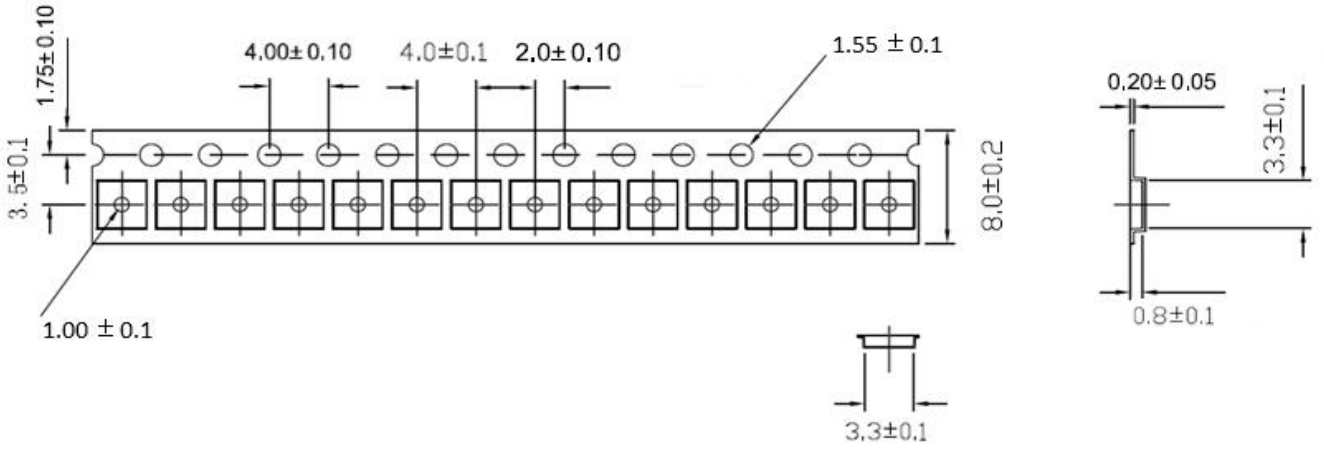
* Measurement tolerance is ±0.10mm.

Soldering Pad Pattern (Unit: mm)

Recommended soldering pattern:

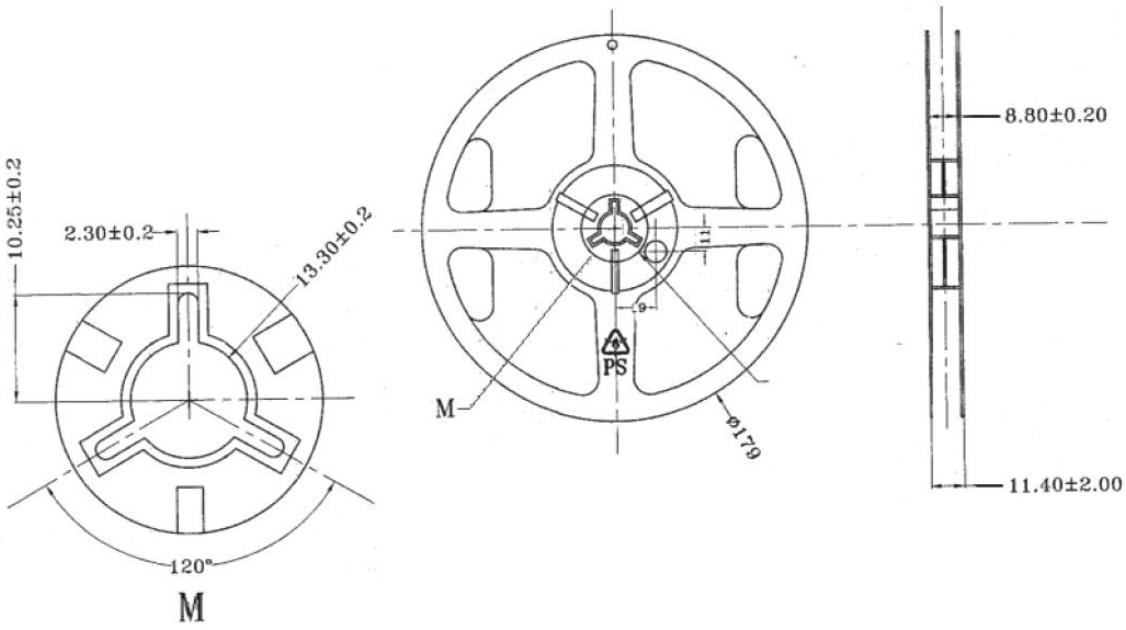


Packaging Information



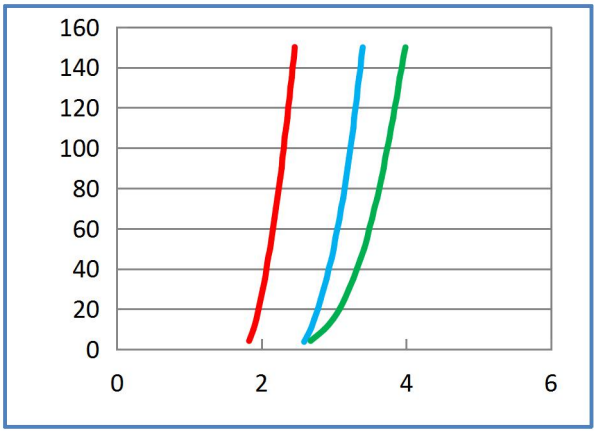
• Quantity : 3000pcs/Reel
• Cumulative Tolerance : Cumulative Tolerance/10 pitches to be ±0.2mm.

(3) Reel Dimensions

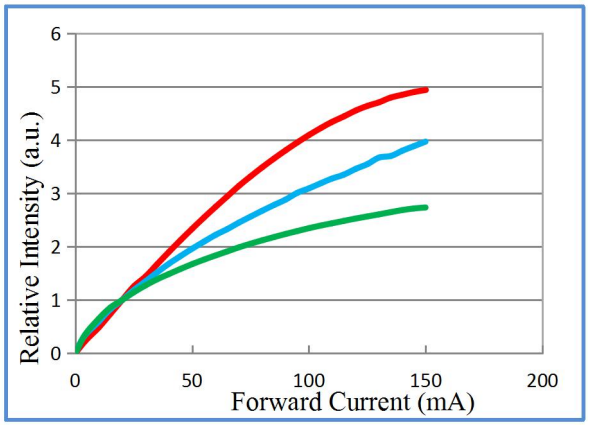


Optical & Electrical Characteristic Curves

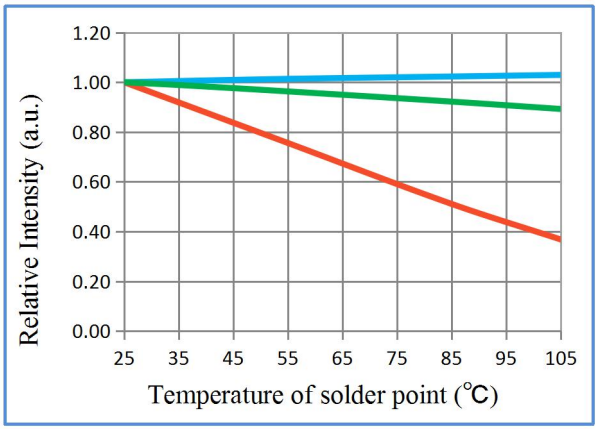
■ Forward Voltage—Forward Current (Ta=25℃)



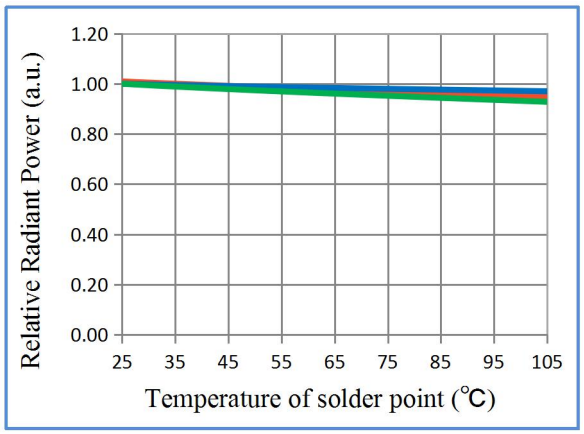
■ Forward Current—Relative Intensity (Ta=25℃)



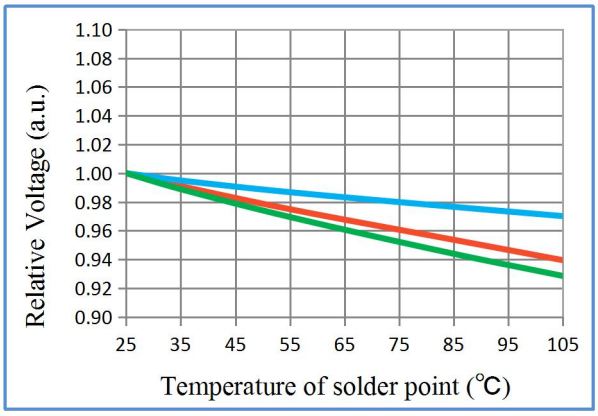
■ Ts—Relative Luminous Intensity (I_F=20mA)



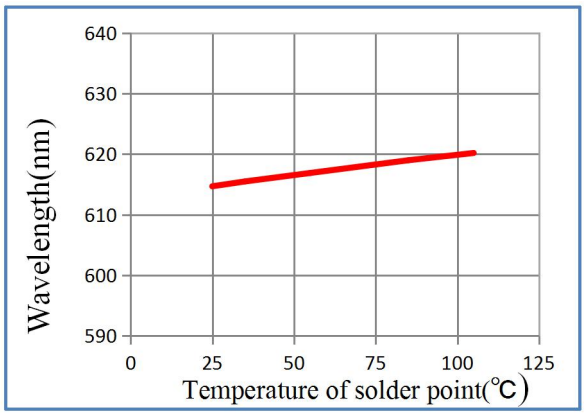
■ Ts—Relative Radiant Power (I_F=20mA)



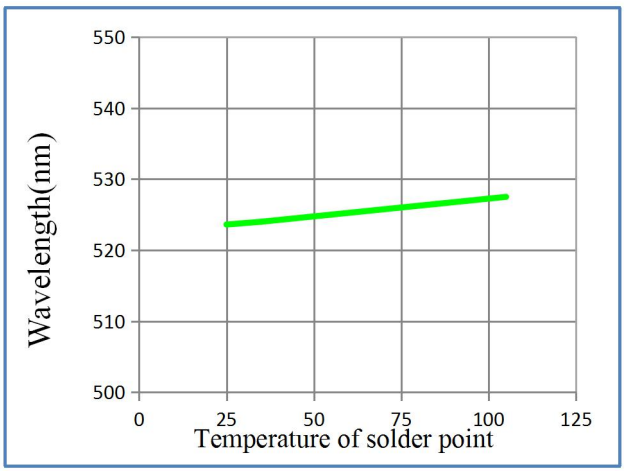
■ Ts—Forward Voltage (I_F=20mA)



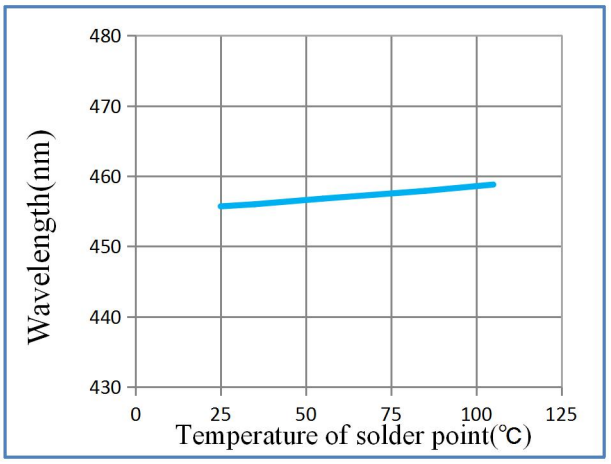
■ Ts—Dominant wavelength (I_F=20mA,Red)



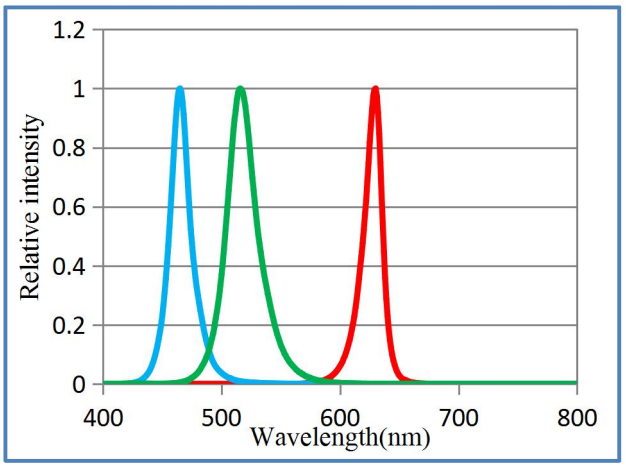
■Ts—Dominant wavelength (I_F=20mA,Green)



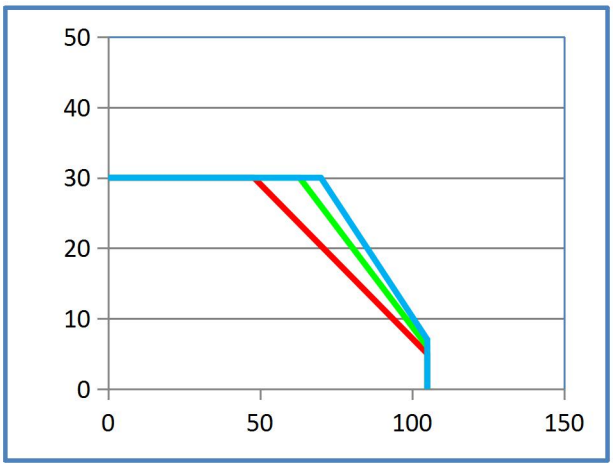
■Ts—Dominant wavelength (I_F=20mA,Blue)



■Spectrum (I_F=20mA, Ta=25℃)

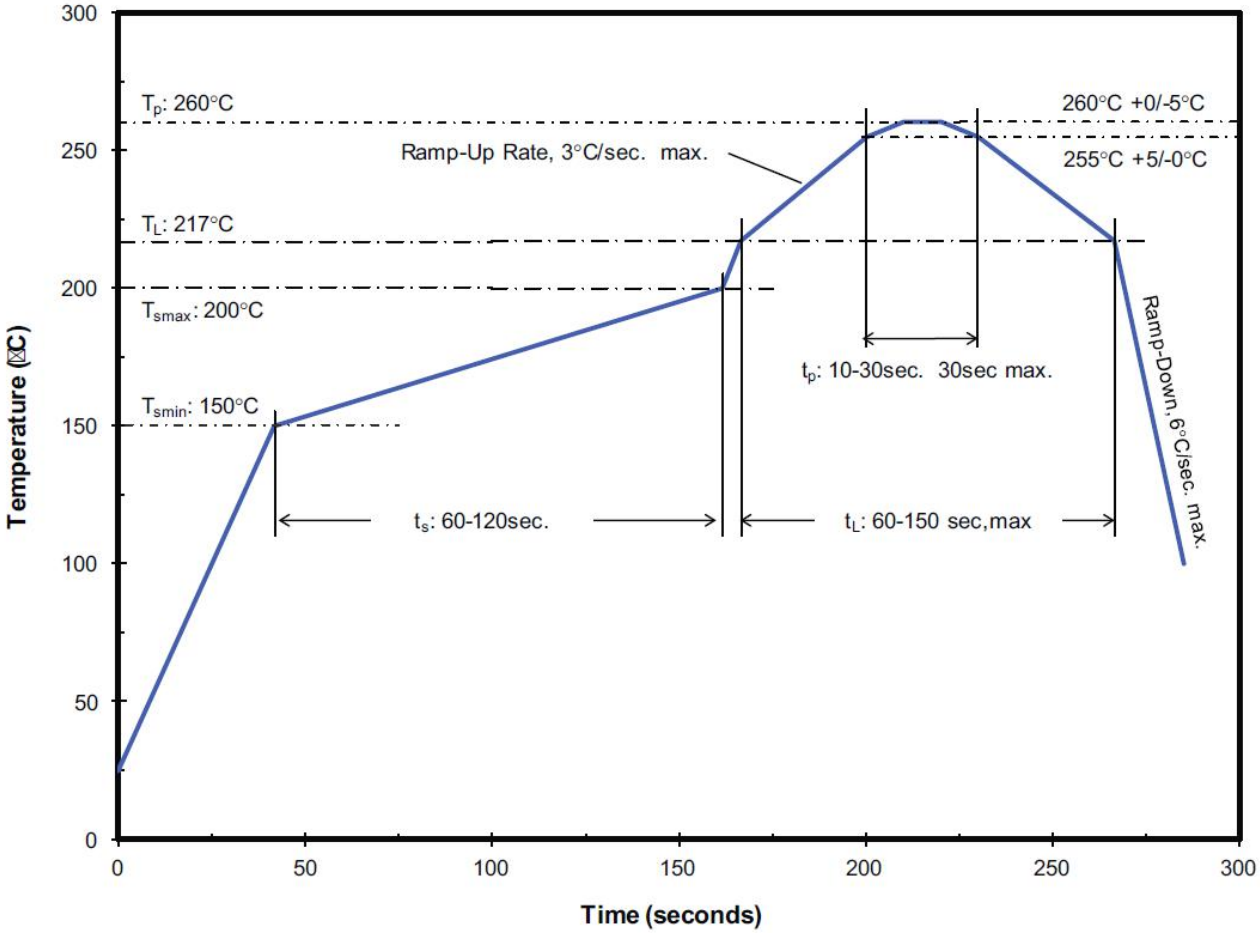


■ Ambient Temperature—Allowable Forward Current



Reflow Soldering Characteristics

Reflow soldering	
Temperature Min (Tsmin) Temperature Max (Tsmax) Time(ts)from (Tsmin to Tsmax)	150° C 200° C 60-120 seconds.
Ramp-up rate (TL to Tp)	3° C/seconds max.
Liquidous temperature(TL) Time(tL) maintained above TL	217° C 60-150 seconds
Peak package body temperature(Tp)	260° C max
Time (tp) within 5 ° C of the specified classification temperature(Tc).	30 seconds max
Ramp-down rate (Tp to TL)	6° C/second max
Time 25 ° C to peak temperature	8 min max



* Reflow soldering is recommended not to be done more than twice.
* Do not stress on LEDs during soldering process.
* Do not warp the circuit board after soldering.