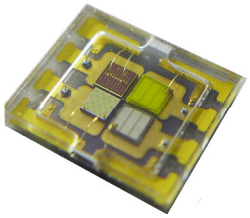
CERRO 5060 series LED

Advanced Datasheet



Description

The Plessey CERRO series is a family of multi-colour, high efficacy LED's in high power packages. Two standard versions are available in RGBW and RGBA configurations. The CERRO 5060 series is packaged in a glass window 5060 package with low thermal resistance to ensure high optical output, cool running and optimum reliability. The LED die are unconnected to allow maximum flexibility in the application. The CERRO series LED's are supplied in quantities of 400 per reel.

Features

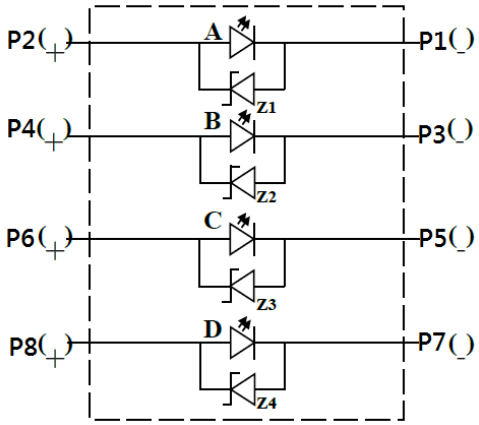
- RGBW & RGBA variants
- 700mA operating current
- Industry standard 5060 footprint
- High optical output
- High reliability ceramic packaging
- 140deg domed silicone lens
- Integrated ESD protection

Applications

- Stage Lighting
- Entertainment Lighting
- Commercial Lighting
- Signage
- Displays

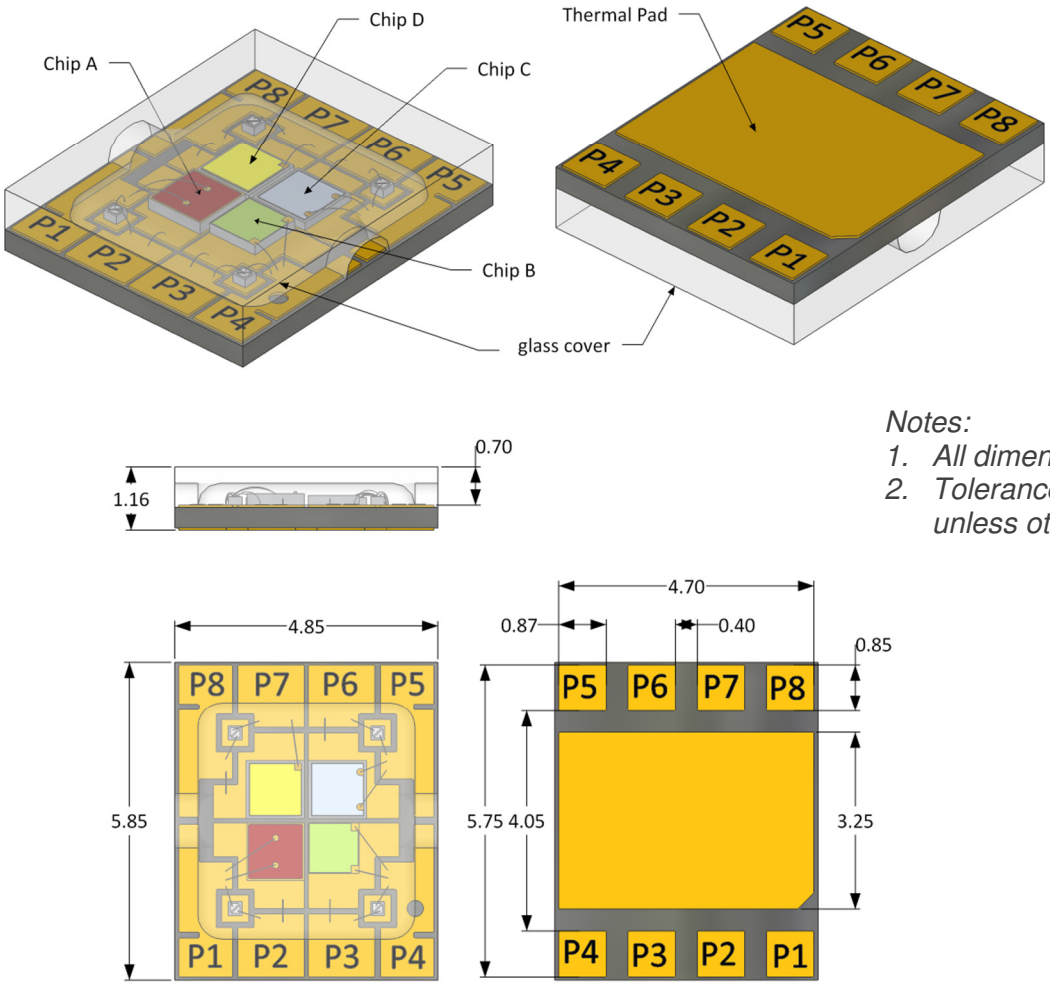
	colour	CCT / λ_{DOM}		Iv @ 700mA	V_F (V)	
		min	max	min	min	max
PLM5060AA	Red	620nm	635nm	45 lm	2.0	3.0
	Green	520nm	535nm	95 lm	2.8	4.0
	Blue	450nm	460nm	600mW	2.8	4.0
-A	Amber	585nm	595nm	45 lm	2.0	3.0
-W	White	6000K	7000K	140 lm	2.8	4.0

Pin Configuration



Chip	RGBA	RGBW
A	Red	Red
B	Green	Green
C	Blue	Blue
D	Amber	White

Package Outline Dimensions



Notes:
1. *All dimensions are in mm*
2. *Tolerances ±0.13mm unless otherwise stated*

Fig.1 Mechanical drawings of the 5060 package

Absolute Maximum Ratings

T_{amb} = +25°C unless otherwise stated

Parameter	Symbol	Min	Max	Unit
DC Forward Current	I_F	-	700	mA
Reverse Voltage[1]	V_R	-	5	V
ESD Withstand Voltage[2]		-	2000	V
Storage Temperature	T_{stg}	-40	110	°C
Junction Temperature	T_J	-40	125	°C

[1] Plessey LED's are not designed to be driven in reverse bias

[2] JESD-22A-114-B Human Body Model (HBM)

Relative Spectral Emission (Typical)

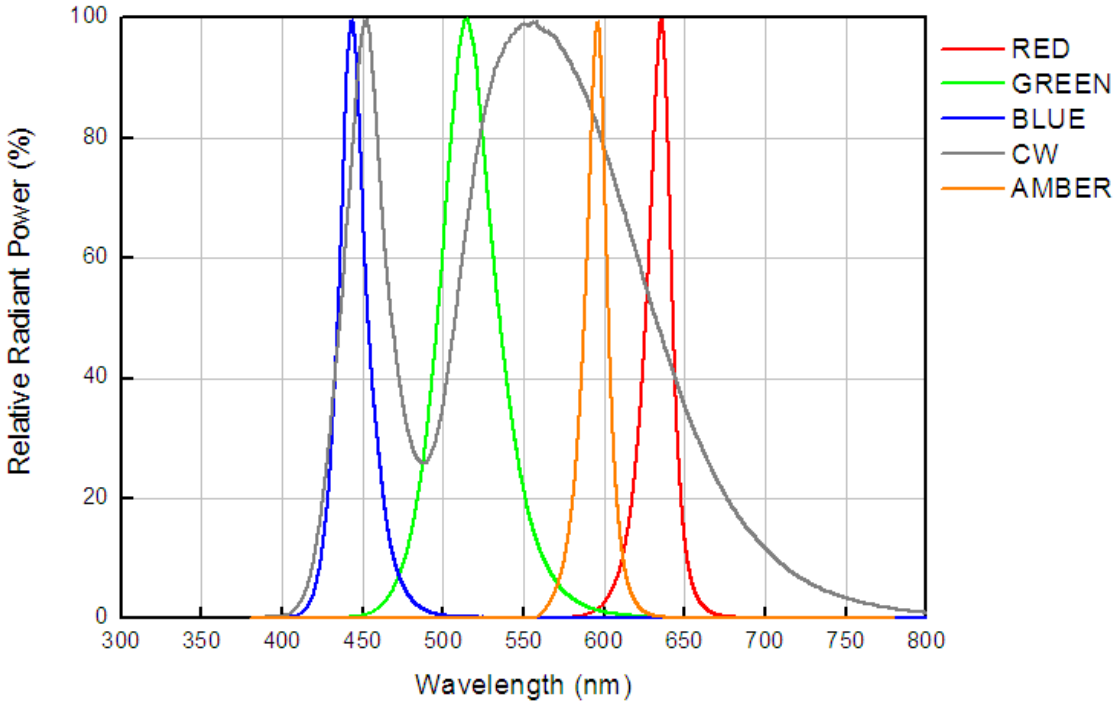


Fig.2 Normalised spectral power distribution

Typical Spatial Radiation Pattern

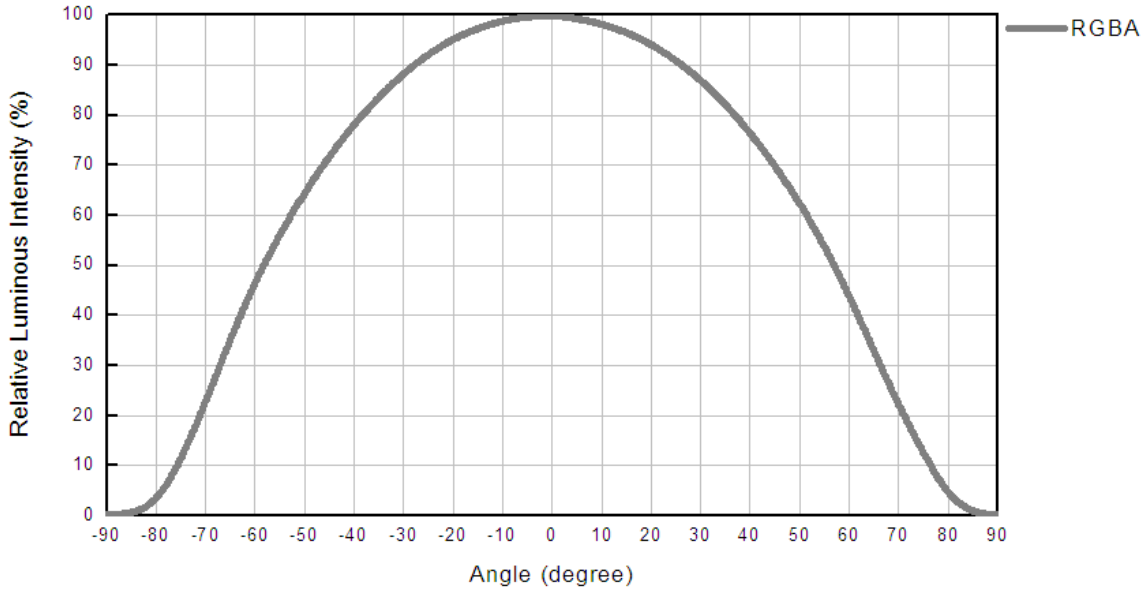


Fig.4 Typical spatial radiation pattern – RGBA

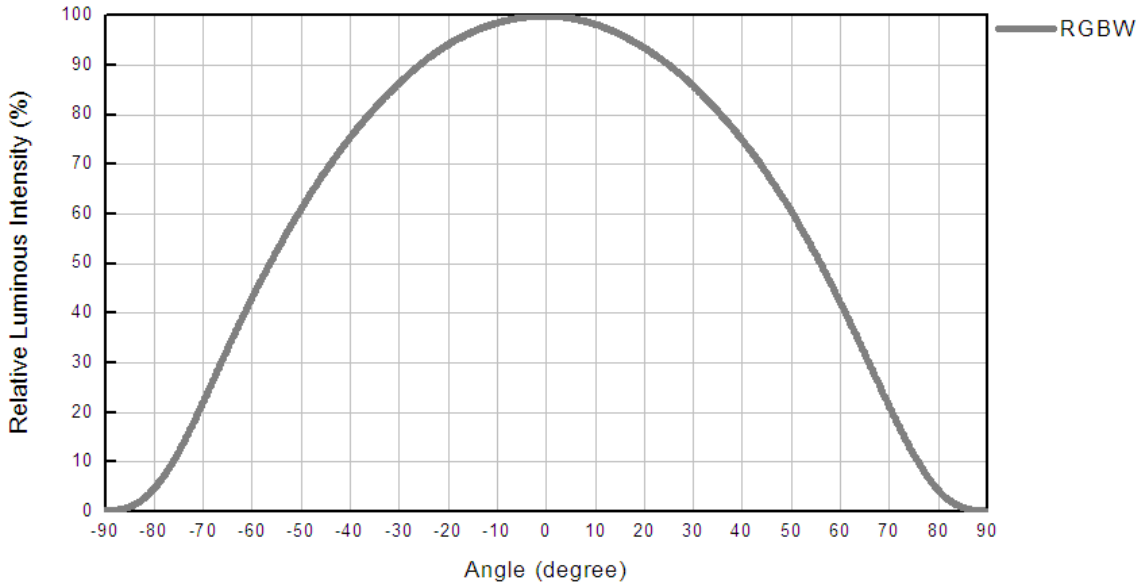


Fig.5 Typical spatial radiation pattern – RGBW

Luminous Flux Characteristics

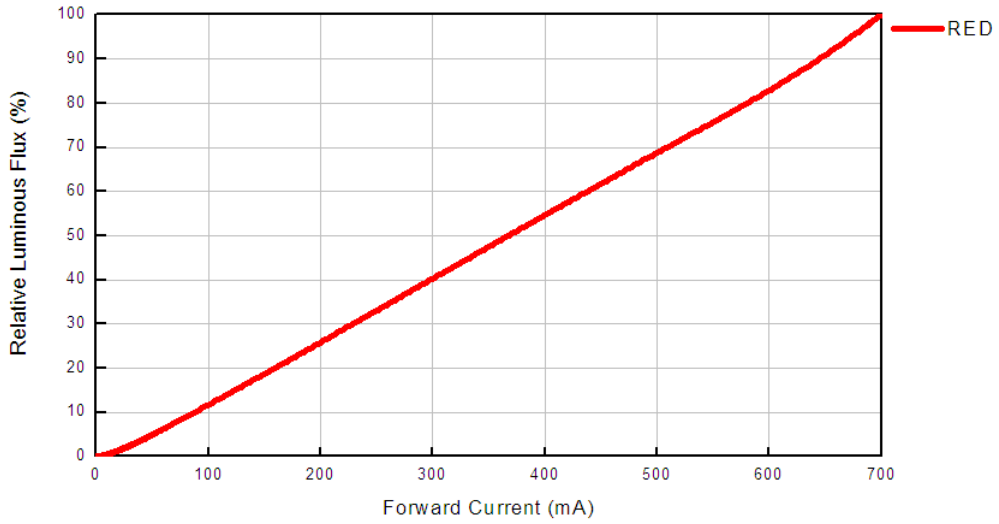


Fig.6 Relative Luminous Flux versus Forward Current – Red

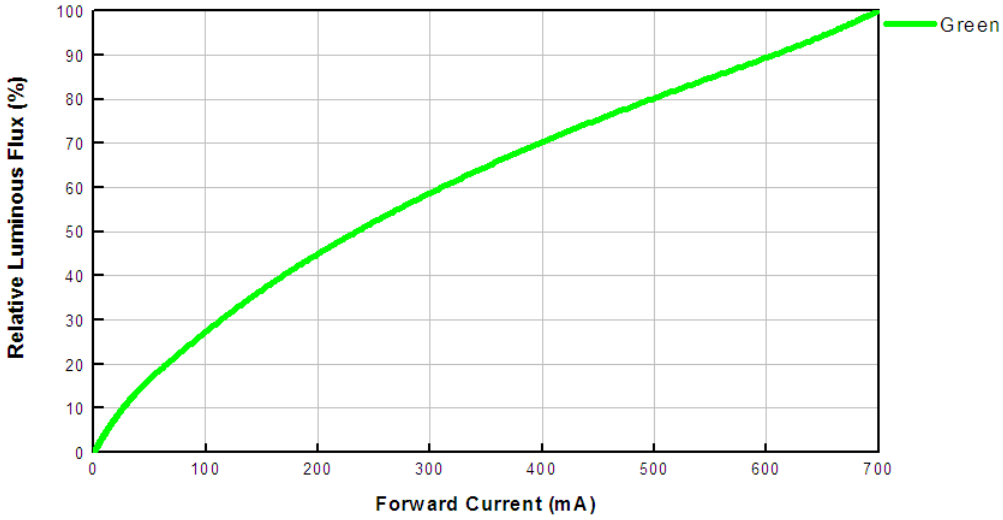


Fig.7 Relative Luminous Flux versus Forward Current – Green

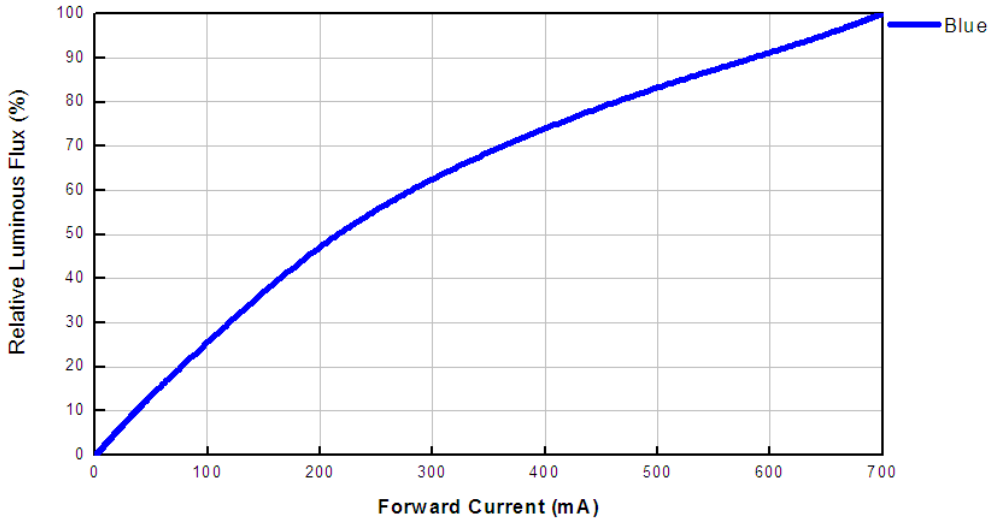


Fig.8 Relative Luminous Flux versus Forward Current – Blue

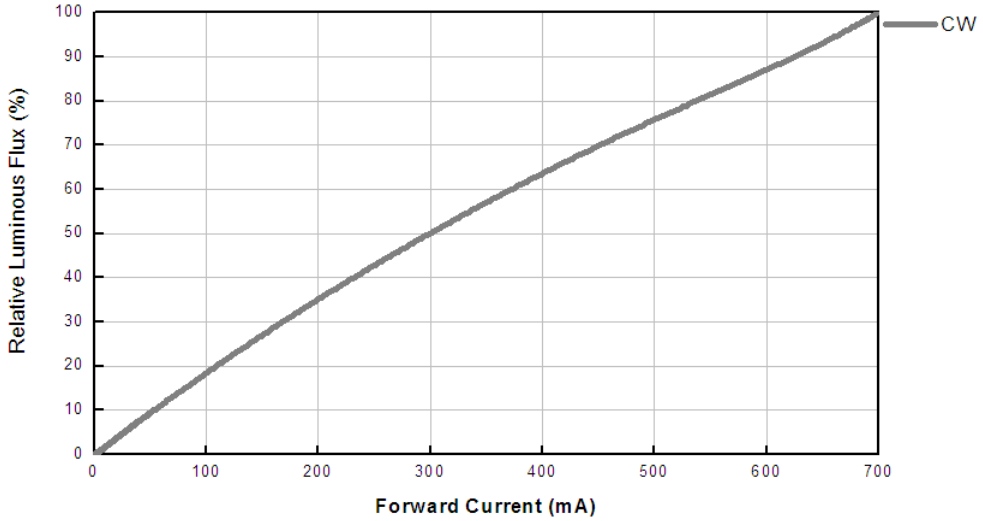


Fig.9 Relative Luminous Flux versus Forward Current – Cool White

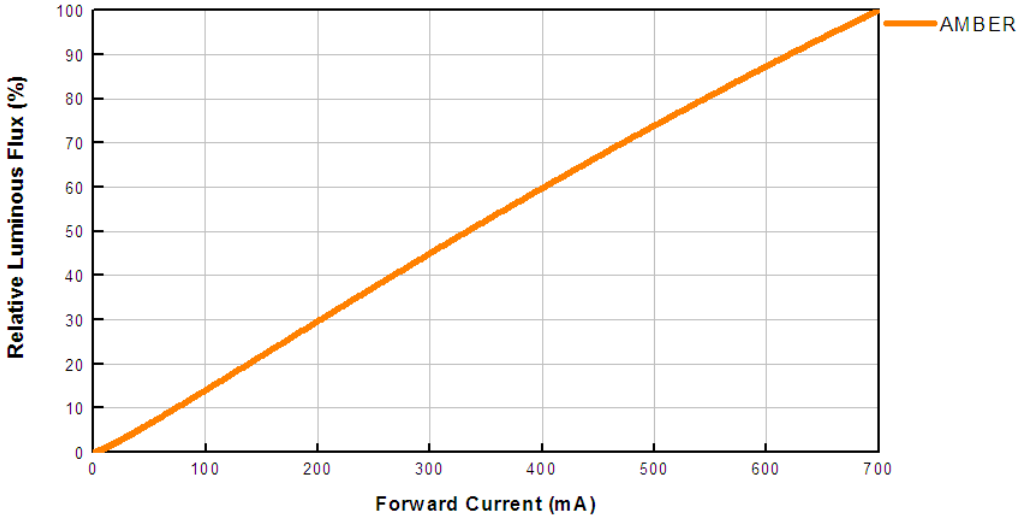


Fig.10 Relative Luminous Flux versus Forward Current – Amber

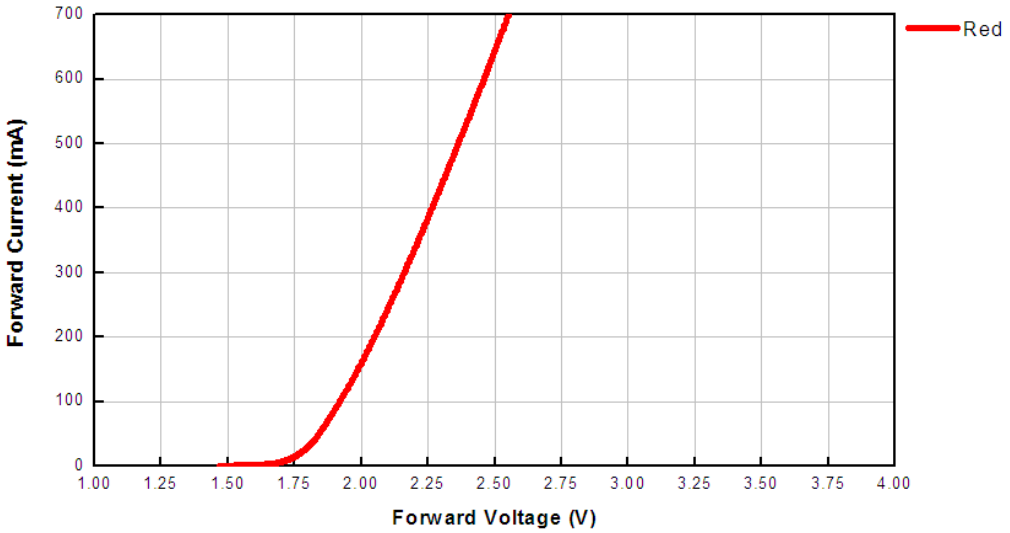


Fig.11 Typical Forward Voltage versus Forward Current – Red

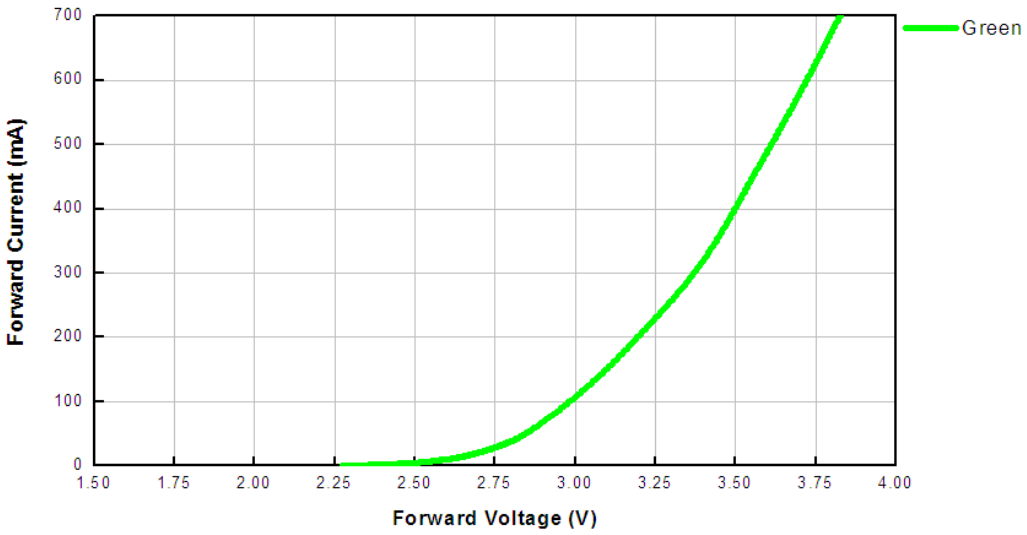


Fig.12 Typical Forward Voltage versus Forward Current – Green

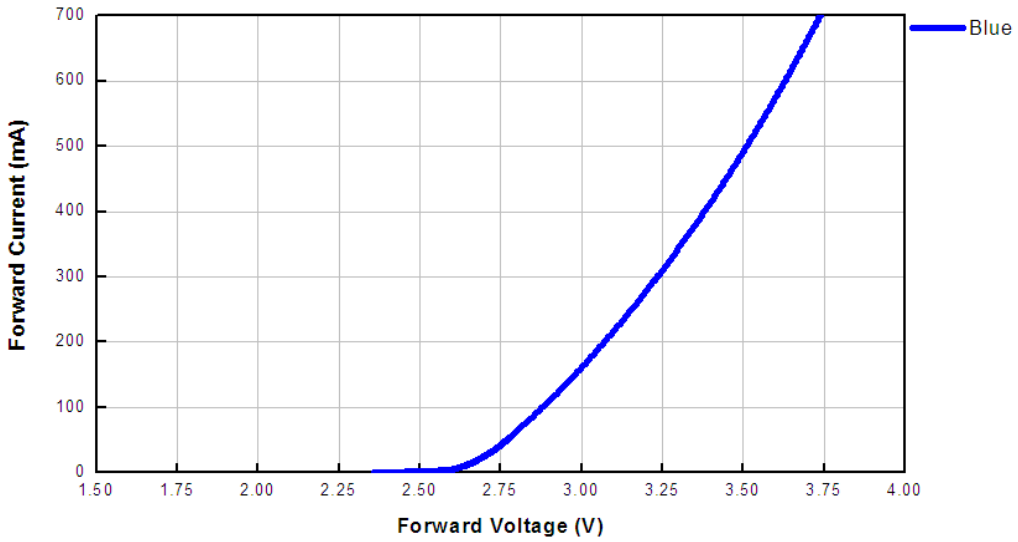


Fig.13 Typical Forward Voltage versus Forward Current – Blue

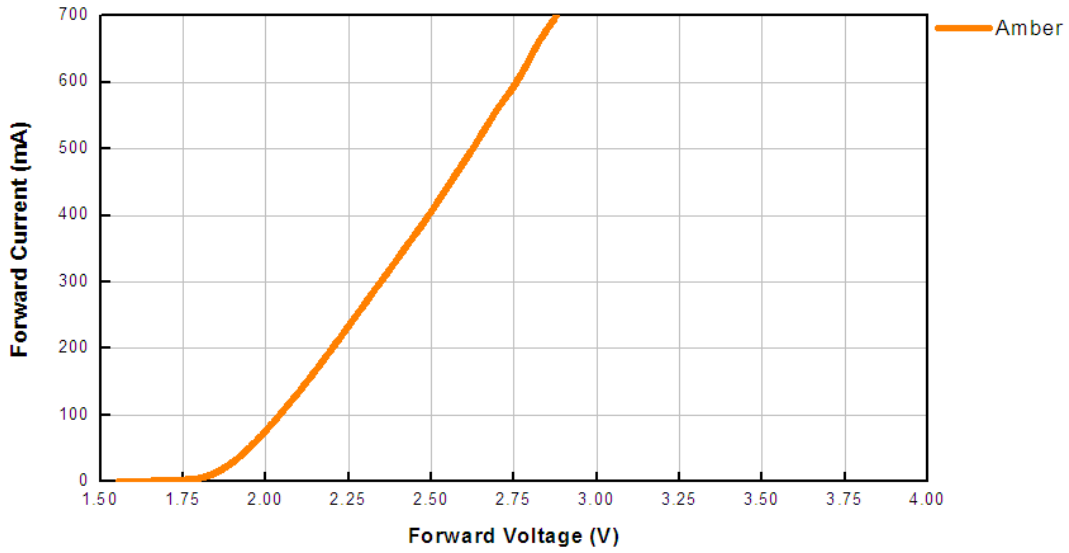


Fig.14 Typical Forward Voltage versus Forward Current – Amber

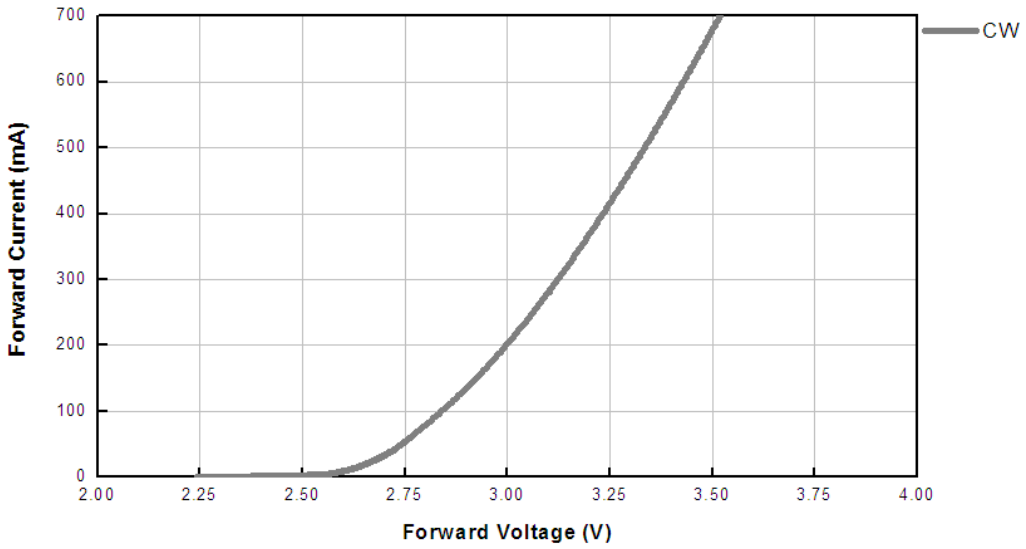


Fig.15 Typical Forward Voltage versus Forward Current – White

Soldering Information

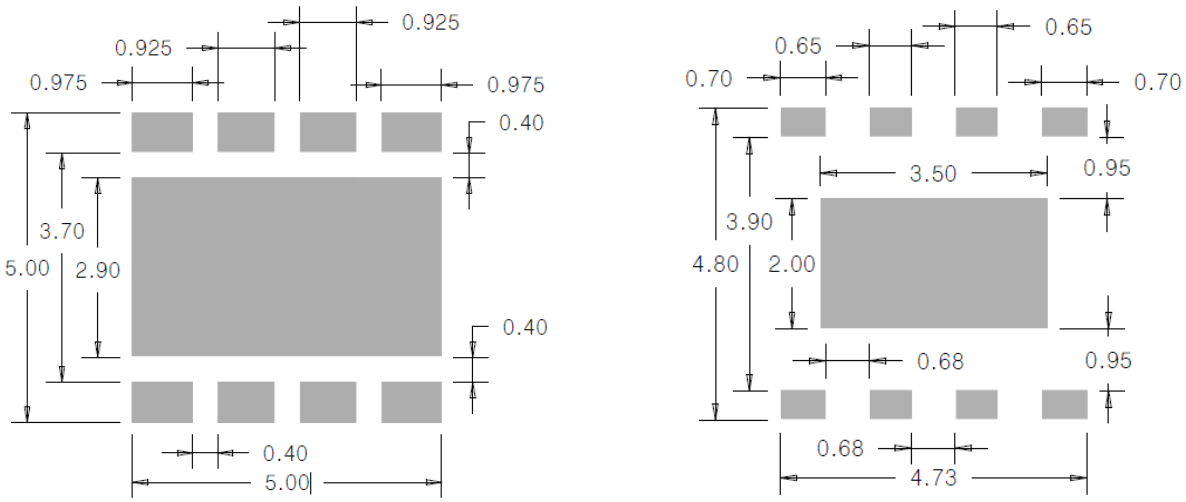


Fig.16 Recommended Solder Pad & Stencil Design (dimensions in mm)

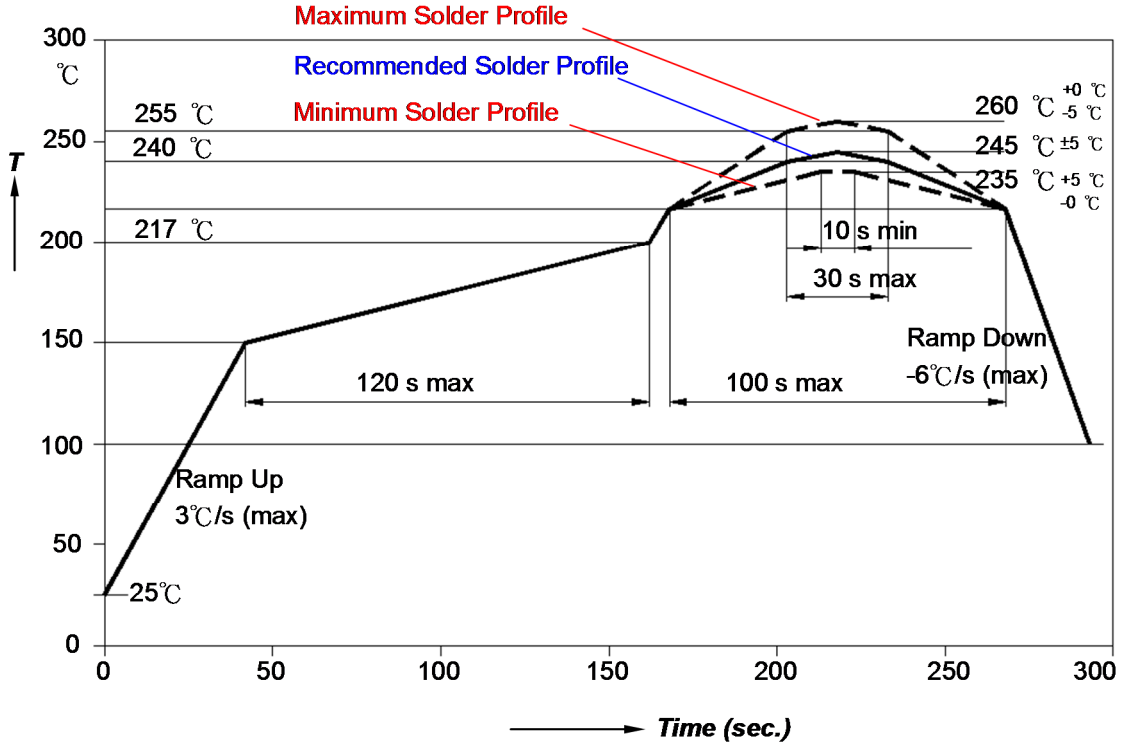
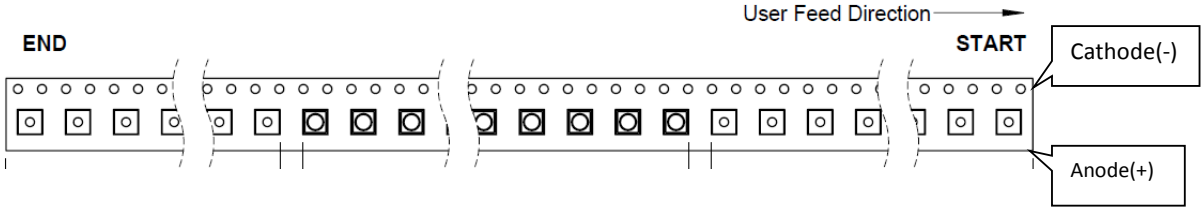


Fig.17 Recommended Solder Profile

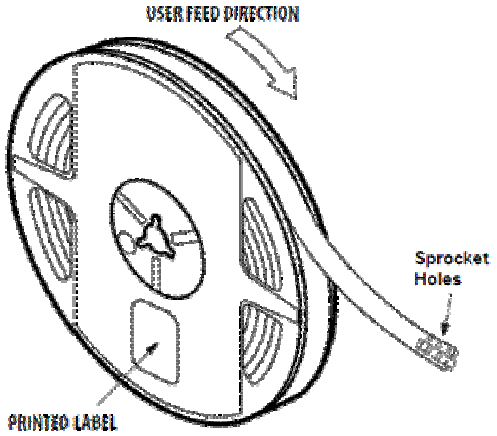
Packing Information

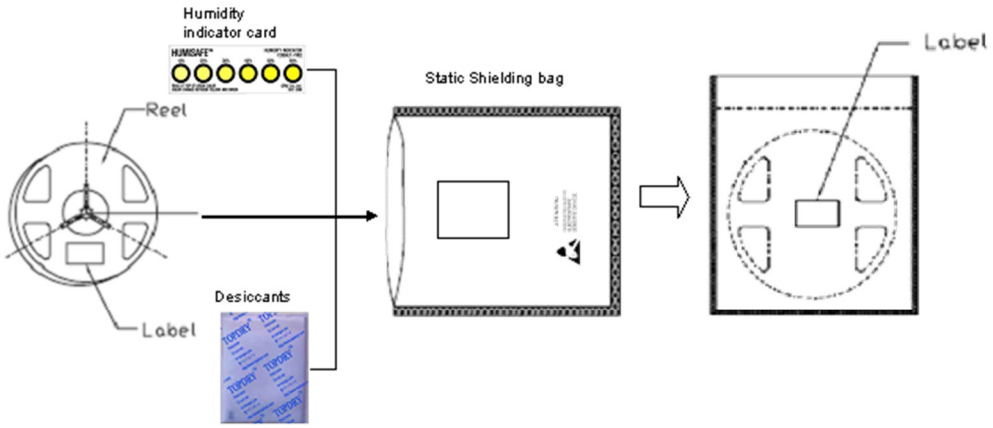


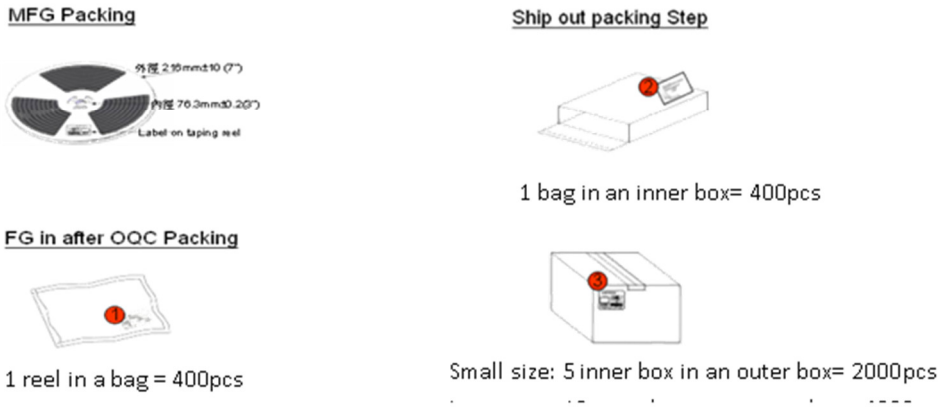
Trailer 160mm (min) of empty pockets sealed with tape

Loaded Pockets

Leader 400mm (min) of empty pockets sealed with tape







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