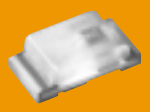
Product Guide

1112C Series Thin Type Ultra Compact SMT LED



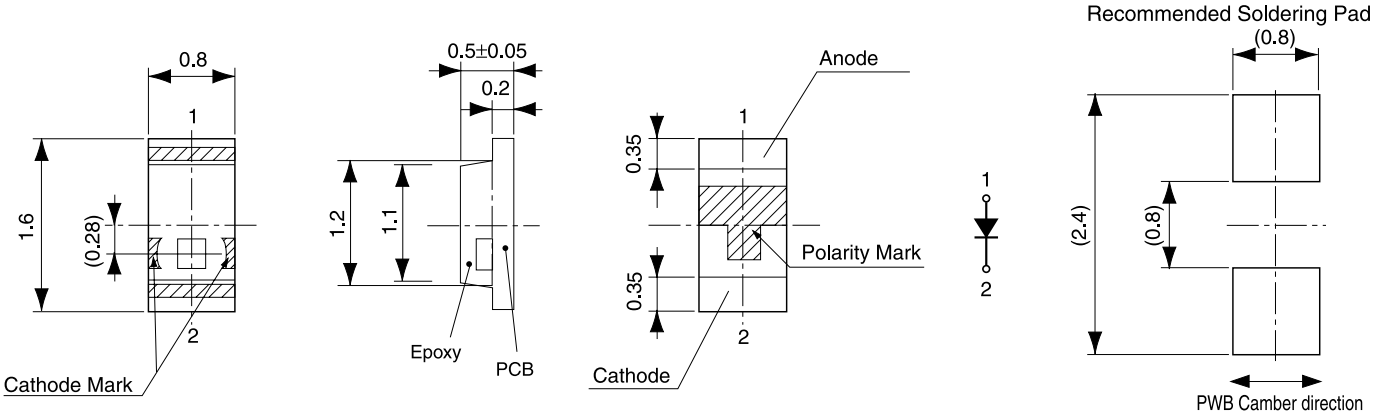
Features

- New packaging technique uses thinner height profile with 1608 (0603) footprint
- Half pitch taping option

Applications

- Cellular phones, pagers
- Mobile Devices
- Excellent for backlighting

Outline Dimensions



Unit: mm
Tolerances ± 0.1

Electro-Optical Characteristics

(Ta=25°C)

Part No.	Material	Emitted Color	Lens Color	Luminous Intensity I_V			Wavelength				Forward Voltage V_F			Reverse Current I_R		Viewing Angle (2 θ 1/2)
							Peak λp	Dominant λd	Spectral Line Half Width Δλ							
				MIN.	TYP.	I_F	TYP.	TYP.	TYP.	I_F	TYP.	MAX.	I_F	MAX.	V_R	
FR1112C	AlInGaP	Red	Milky White	25	45	20	635	626	15	20	1.9	2.4	20	100	5	130°
FA1112C	AlInGaP	Orange		25	50	20	609	605	15	20	1.9	2.4	20	100	5	
FY1112C	AlInGaP	Yellow		25	50	20	590	590	15	20	1.9	2.4	20	100	5	
DR1112C	GaAsP	Red		2.4	4.1	20	650	633	40	20	1.9	2.8	20	100	4	150°
PG1112C	GaP	Green		4.5	7.6	20	560	567	30	20	2.2	2.8	20	100	4	
PY1112C	GaP	Yellow-Green		7.0	11.7	20	570	572	30	20	2.1	2.8	20	100	4	
PY1112CK	GaP	Yellow-Green		3.3	5.6	10	570	572	30	10	2.1	2.8	10	100	4	
Units				mcd		mA	nm			mA	V		mA	μA	V	Deg.

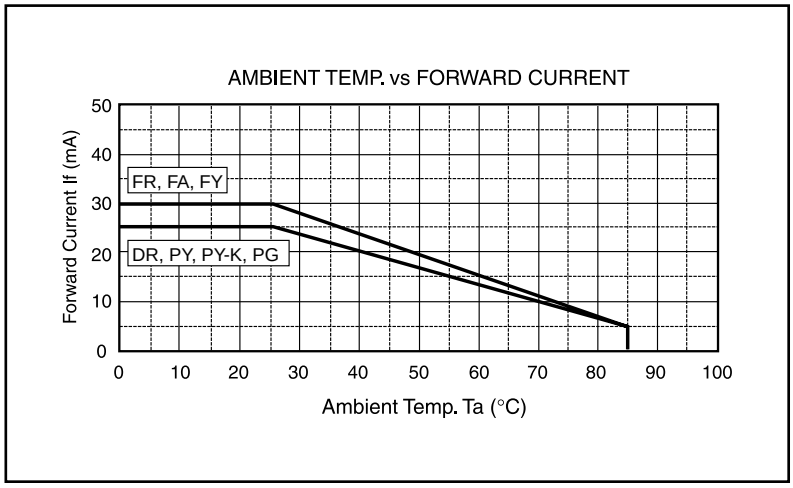
Absolute Maximum Ratings

(Ta=25°C)

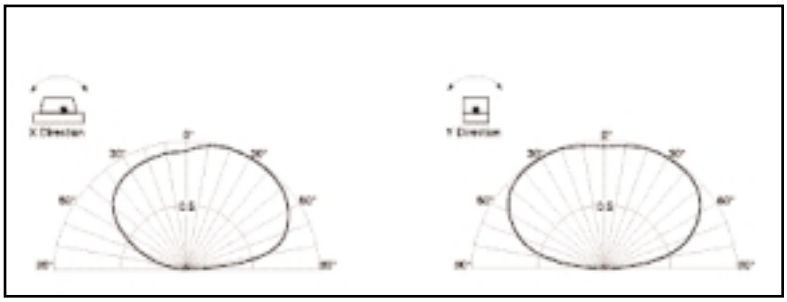
Item	Symbol	Red		Orange	Yellow	Yellow-Green		Green	Units
		FR	DR	FA	FY	PY	PY-K	PG	
Power Dissipation	Pd	81	70	81	81	70	75	70	mW
Forward Current	I_F	30	25	30	30	25	25	25	mA
Peak Forward Current	I_{FM}	100	60	100	100	60	60	60	mA
Reverse Voltage	V_R	5	4	5	5	4	4	4	V
Operating Temperature	Topr	-40 to +85							°C
Storage Temperature	Tstg	-40 to +100							°C
Derating*	ΔI_F	0.43 (DC) 1.0 (Pulse)	0.36 (DC) 0.86 (Pulse)	0.43 (DC) 1.0 (Pulse)		0.36 (DC) 0.86 (Pulse)			mA/°C

* Ta=25°C, I_{FM} applies for the pulse width ≤ 1msec. and duty cycle ≤1/20.

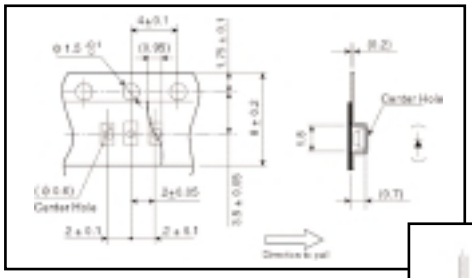
Operation Current Derating Chart (DC)



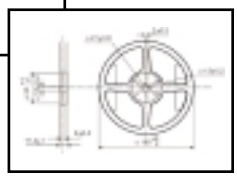
Spatial Distribution



Taping Specifications



Quantity on tape:
4000 pieces
per reel

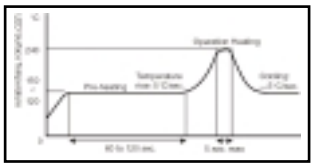


Precautions

Please follow these handling precautions to prevent damage to the chip and ensure its reliability.

1. Soldering conditions:

- Soldering iron: Temperature at tip of iron: 280°C max. (30W max.)
  Soldering time: 3 sec. max.
- Dip soldering: Preheating: 120 ~ 150°C max. (resin surface temp.)
  60 ~ 120 sec. max. Bath temperature: 260°C max. Dipping Time: 5 sec. max.
- Reflow Soldering:



2. Cleaning:

- If cleaning is required, use the following solutions for less than 1 minute, at less than 40°C.
- Appropriate chemicals: Ethyl alcohol and isopropyl alcohol.
- Effect of ultrasonic cleaning on the LED resin body differs depending on such factors as the oscillator output, size of PCB and LED mounting method. The use of ultrasonic cleaning should be enforced at proper output after confirming there is no problem.

Product specifications subject to change without notice. PG1112C-0301

Stanley Electric Sales of America, Inc.
2660 Barranca Parkway, Irvine, CA 92606 • Tel: 800-LED-LCD1 (533-5231) • Fax: 949-222-0555
Website: www.stanley-electric.com