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Stanley Electric
HKR1105W-TR

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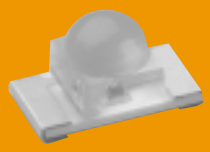
sales@integrated-circuit.com

Product Guide

H_1105W Series, Dome Lens Type SMT LED



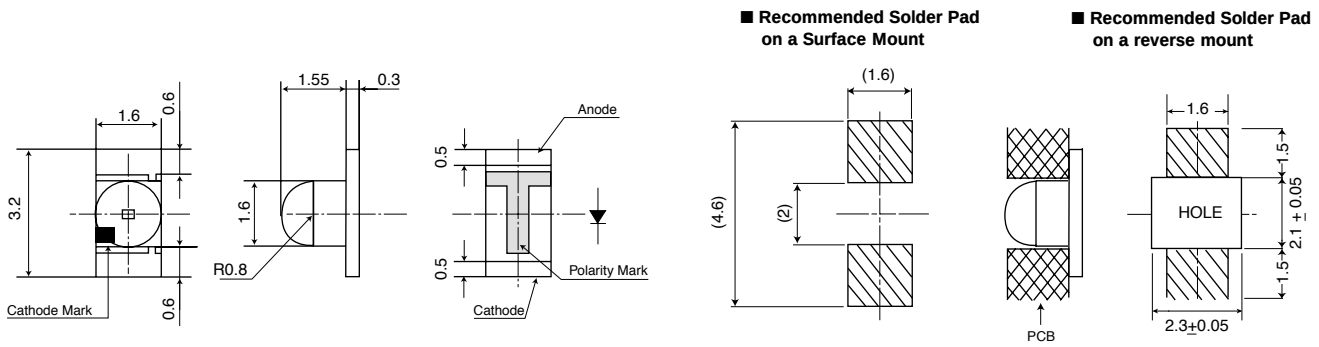
Features

- Dome lens provides intensified narrow, bright beam
- Available for both standard and reverse mounting
- Wider operating temperature: -40° ~ +100°C (HBG: -40° ~ +85°C)

Applications

- High-beam indicator for automotive use
- Backlighting for automotive dashboards
- Indoor / outdoor full-color signboards

Outline Dimensions



Unit: mm
Tolerance ± 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)
				MIN.	TYP.	I_F	Peak λp TYP.	Dominant λd TYP.	Spectral Line Half Width Δλ TYP.	I_F	TYP.	MAX.	I_F	MAX.	V_R	
HKR1105W	GaAlAs	Red	Water Clear	70	150	20	660	647	25	20	1.8	2.5	20	100	4	30°
HBR1105W	GaAlAs	Red		25	50	20	660	647	30	20	1.7	2.0	20	100	4	50°
HAA1105W	GaAsP	Orange		10	20	20	605	606	30	20	2.2	2.5	20	100	4	40°
HAY1105W	GaAsP	Yellow		10	20	20	580	590	30	20	2.2	2.5	20	100	4	
HPY1105W	GaP	Yellow-Green		20	50	20	570	572	30	20	2.1	2.5	20	100	4	
HPG1105W	GaP	Green		15	30	20	560	567	30	20	2.1	2.5	20	100	4	
HBG1105W	GaP	Pure Green		6	12	20	555	558	30	20	2.1	2.5	20	100	4	
Units				mcd		mA	nm			mA	V		mA	μA	V	Deg.

Absolute Maximum Ratings

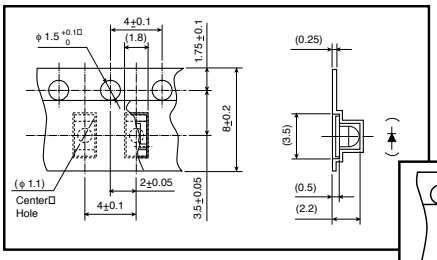
(Ta=25°C)

Item	Symbol	Red HBR, HKR	Orange HAA	Yellow HAY	Yellow-Green HPY	Green HPG	Pure Green HBG	Units
Power Dissipation	Pd	60(HBR),75(HKR)	75	75	75	75	75	mW
Forward Current	I_F	30	30	30	30	30	30	mA
Peak Forward Current	I_{FM}	70	70	70	70	70	70	mA
Reverse Voltage	V_R	4	4	4	4	4	4	V
Operating Temperature	Topr	-40 to +100					-40 to +85	°C
Storage Temperature	Tstg	-40 to +120					-40 to +100	°C
Derating*	ΔI_F	1.0 (DC) 2.33 (Pulse)					0.42 (DC) 0.93 (Pulse)	mA/°C

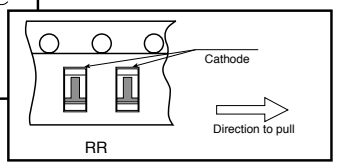
* Ta=25°C, I_{FM} applies for the pulse width ≤ 1msec. and duty cycle ≤1/20.
The current derating for operation applies when the temperature is above 25°C for HBG and 75°C for HVR, HBR, HKR, HAA, HAY, HPY & HPG

Taping Specifications

for Reverse Mount Type

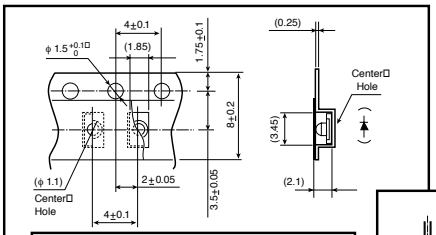


Quantity on tape:
2000 pieces
per reel

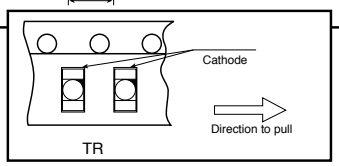


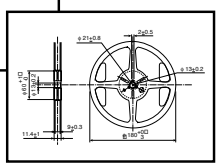
Taping Specifications

for Standard Mount Type

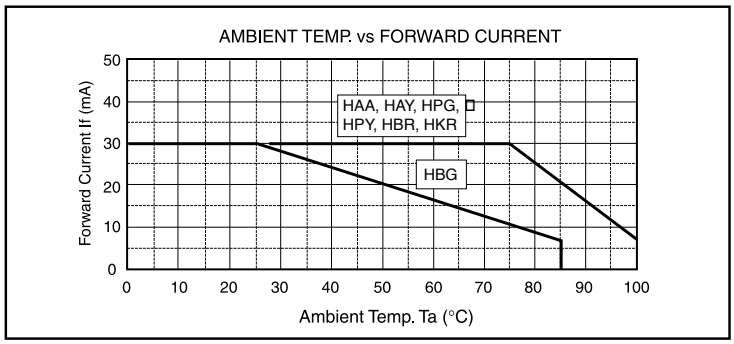


Quantity on tape:
2000 pieces
per reel

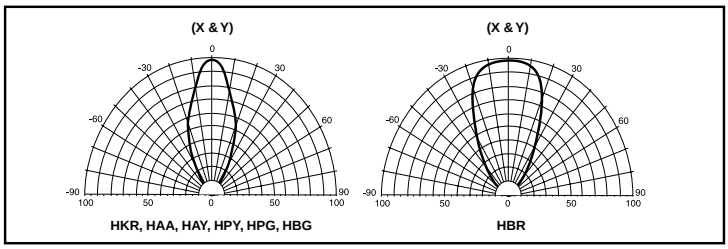




Operation Current Derating Chart (DC)



Spatial Distribution

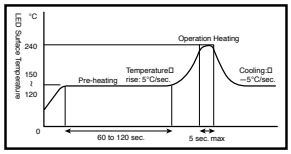


Precautions

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. PGH__1105W-0301