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SUPER BRIGHT ROUND TYPE LED LAMPS



Lead-Free Parts

## LHYS2040/H0/A-PF

# DATA SHEET

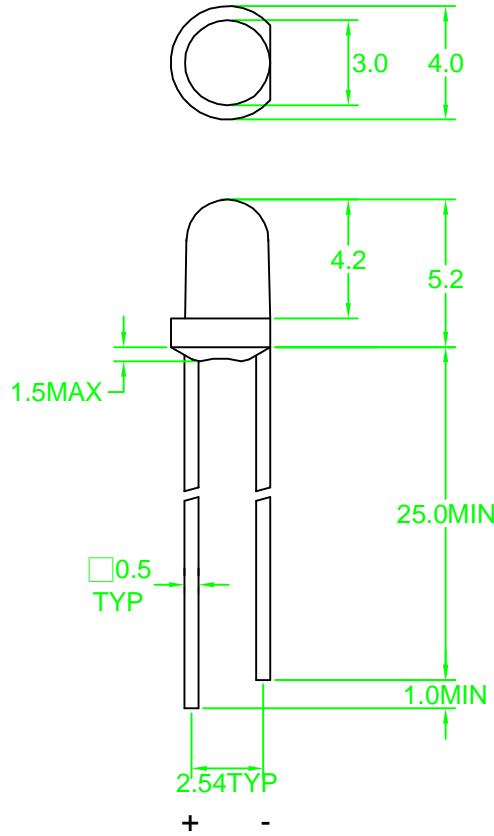
DOC. NO : QW0905-LHYS2040/H0/A-PF

REV. : A

DATE : 26 - Jan. - 2016

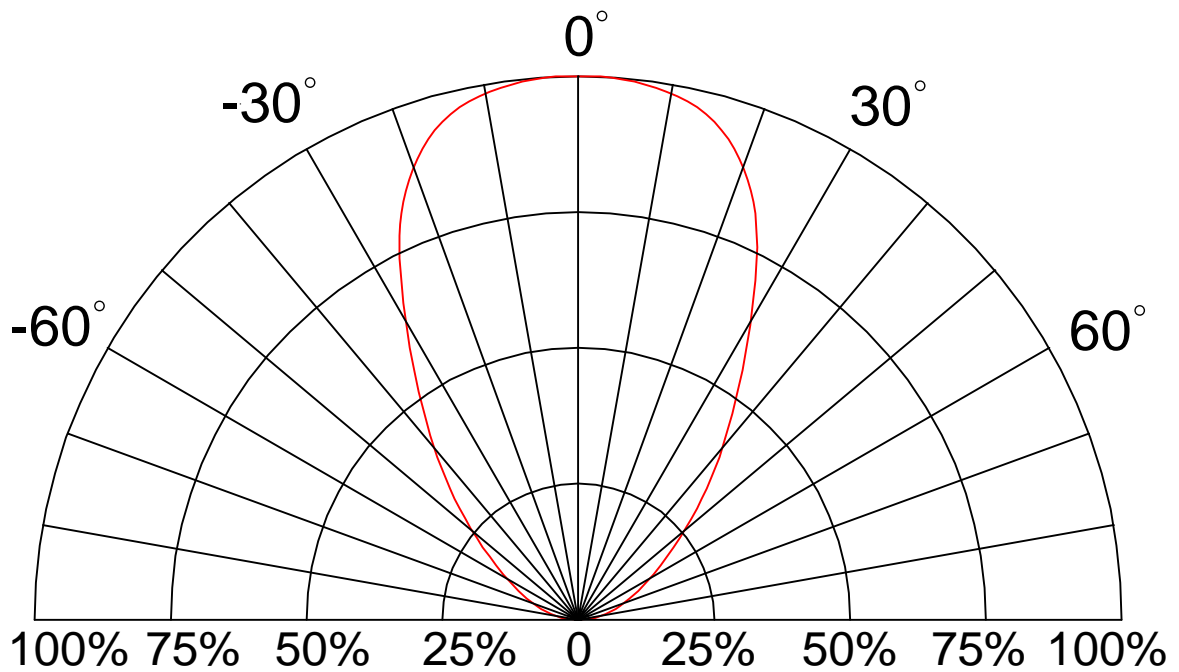


**Package Dimensions**



Note : 1.All dimension are in millimeter tolerance is  $\pm 0.25\text{mm}$  unless otherwise noted.  
 2.Specifications are subject to change without notice.

**Directivity Radiation**



Absolute Maximum Ratings at Ta=25 °C

Parameter	Symbol	Ratings	UNIT
		HYS	
Forward Current	IF	30	mA
Peak Forward Current Duty 1/10@10KHz	IFP	60	mA
Power Dissipation	PD	75	mW
Reverse Current @5V	Ir	10	μA
Electrostatic Discharge	ESD	2000	V
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +100	°C

Typical Electrical & Optical Characteristics (Ta=25 °C)

PART NO	MATERIAL	COLOR		Dominant wave length λ Dnm	Spectral halfwidth △ λ nm	Forward voltage @20mA(V)		Luminous intensity @20mA(mcd)		Viewing angle 2θ 1/2 (deg)
		Emitted	Lens			Min.	Max.	Min.	Typ.	
LHYS2040/H0/A-PF	AlGaInP	Yellow	Yellow Diffused	587	15	1.7	2.6	350	700	72

Note : 1.The forward voltage data did not including ±0.1V testing tolerance.  
2. The luminous intensity data did not including ±15% testing tolerance.

**Brightness Code For Standard LED Lamps****Bin Code**

HYS CHIP

Group	Radiant Intensity(mW/sr) at 20 mA	
	Min.	Max.
A17	350	450
A18	450	550
A19	550	700
A20	700	900
A21	900	1100

## Typical Electro-Optical Characteristics Curve HYS CHIP

Fig.1 Forward current vs. Forward Voltage

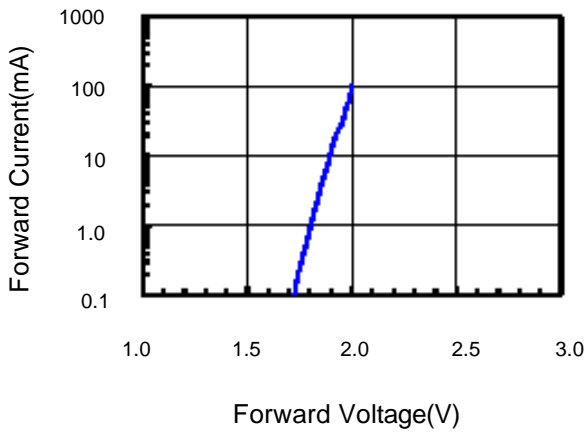


Fig.2 Relative Intensity vs. Forward Current

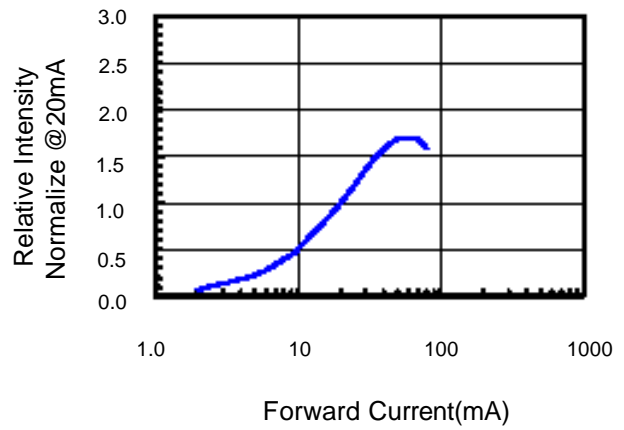


Fig.3 Forward Voltage vs. Temperature

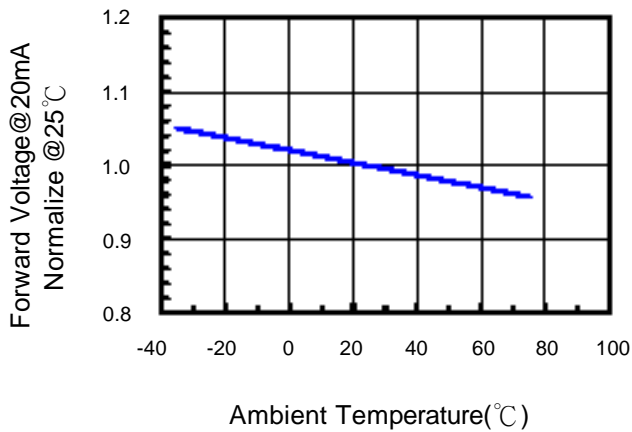


Fig.4 Relative Intensity vs. Temperature

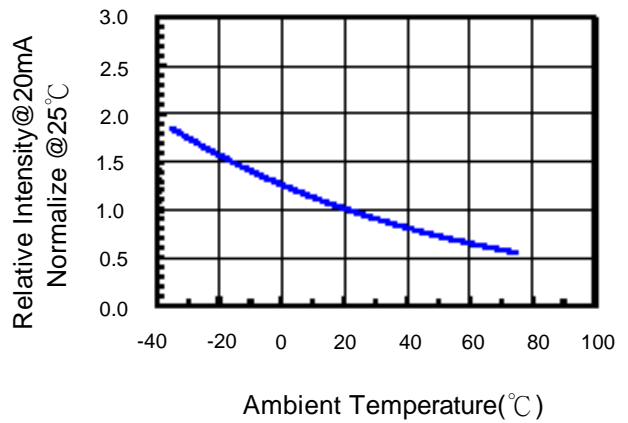
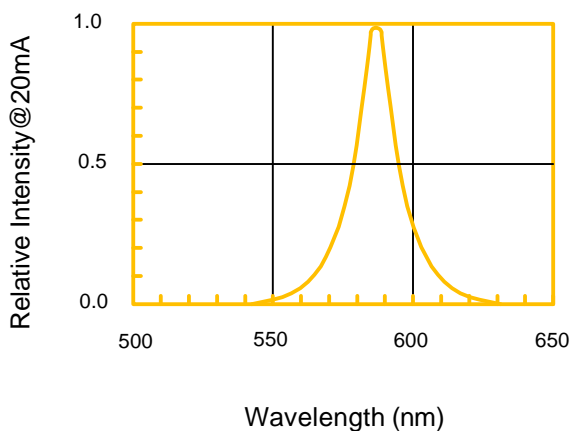


Fig.5 Relative Intensity vs. Wavelength

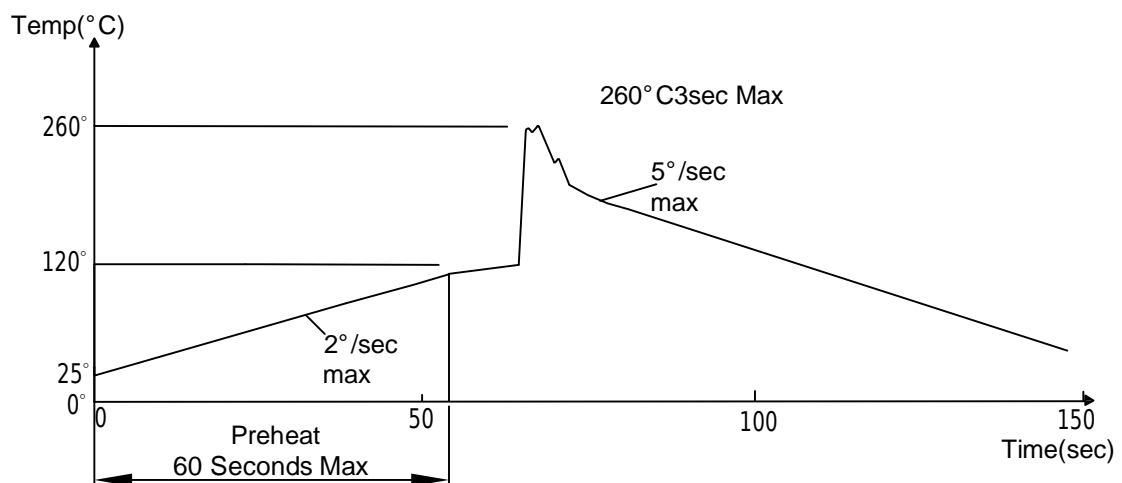


**Soldering Condition(Pb-Free)****1.Iron:**

Soldering Iron:30W Max  
Temperature 350° C Max  
Soldering Time:3 Seconds Max(One Time)  
Distance:2mm Min(From solder joint to body)

**2.Wave Soldering Profile**

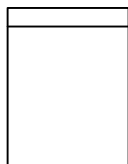
Dip Soldering  
Preheat: 120° C Max  
Preheat time: 60seconds Max  
Ramp-up  
2° C/sec(max)  
Ramp-Down:-5° C/sec(max)  
Solder Bath:260° C Max  
Dipping Time:3 seconds Max  
Distance:2mm Min(From solder joint to body)



**Reliability Test:**

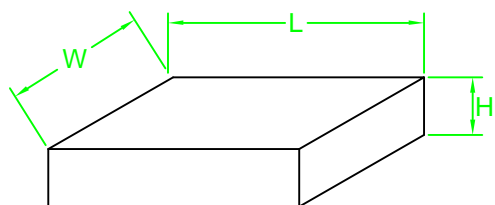
Test Item	Test Condition	Description	Reference Standard
Operating Life Test	1.Under Room Temperature 2.If=20mA 3.t=1000 hrs (-24hrs, +72hrs)	This test is conducted for the purpose of determining the resistance of a part in electrical and thermal stressed.	MIL-STD-750: 1026 MIL-STD-883: 1005 JIS C 7021: B-1
High Temperature Storage Test	1.Ta=105 °C ±5°C 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this is the resistance of the device which is laid under condition of high temperature for hours.	MIL-STD-883:1008 JIS C 7021: B-10
Low Temperature Storage Test	1.Ta=-40 °C ±5°C 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this is the resistance of the device which is laid under condition of low temperature for hours.	JIS C 7021: B-12
High Temperature High Humidity Test	1.Ta=65 °C ±5°C 2.RH=90%~95% 3.t=240hrs ±2hrs	The purpose of this test is the resistance of the device under tropical for hours.	MIL-STD-202:103B JIS C 7021: B-11
Thermal Shock Test	1.Ta=105 °C ±5°C & -40 °C ±5°C (10min) (10min) 2.total 10 cycles	The purpose of this is the resistance of the device to sudden extreme changes in high and low temperature.	MIL-STD-202: 107D MIL-STD-750: 1051 MIL-STD-883: 1011
Solder Resistance Test	1.T.Sol=260 °C ±5°C 2.Dwell time= 10 ±1sec.	This test intended to determine the thermal characteristic resistance of the device to sudden exposures at extreme changes in temperature when soldering the lead wire.	MIL-STD-202: 210A MIL-STD-750: 2031 JIS C 7021: A-1
Solderability Test	1.T.Sol=245 °C ±5°C 2.Dwell time=5 ±1sec	This test intended to see soldering well performed or not.	MIL-STD-202: 208D MIL-STD-750: 2026 MIL-STD-883: 2003 JIS C 7021: A-2

### 1. 1000PCS / BAG



### 2. 8 BAG / INNER BOX

SIZE : L X W X H 33.5cm X 19cm X 7.5cm



### 3. 12 INNER BOXES / CARTON

SIZE : L X W X H 58.5cm X 34cm X 34cm

