

NPN SILICON PHOTOTRANSISTOR LED LAMPS



Lead-Free Parts

LPT2043/A-PF

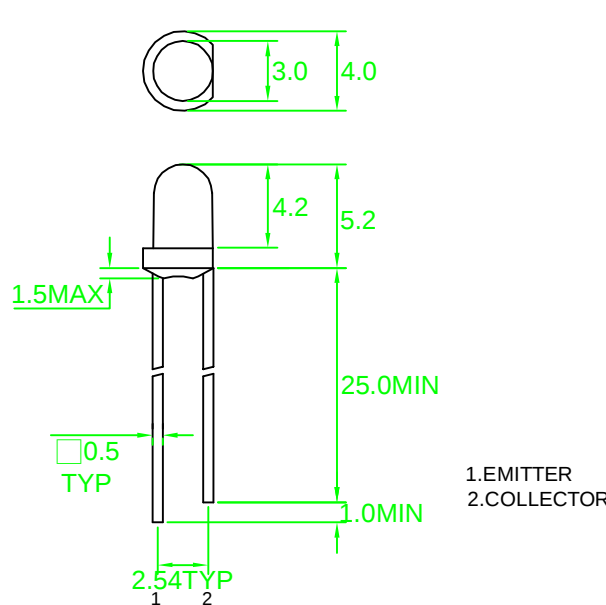
DATA SHEET

DOC. NO : QW0905-LPT2043/A-PF

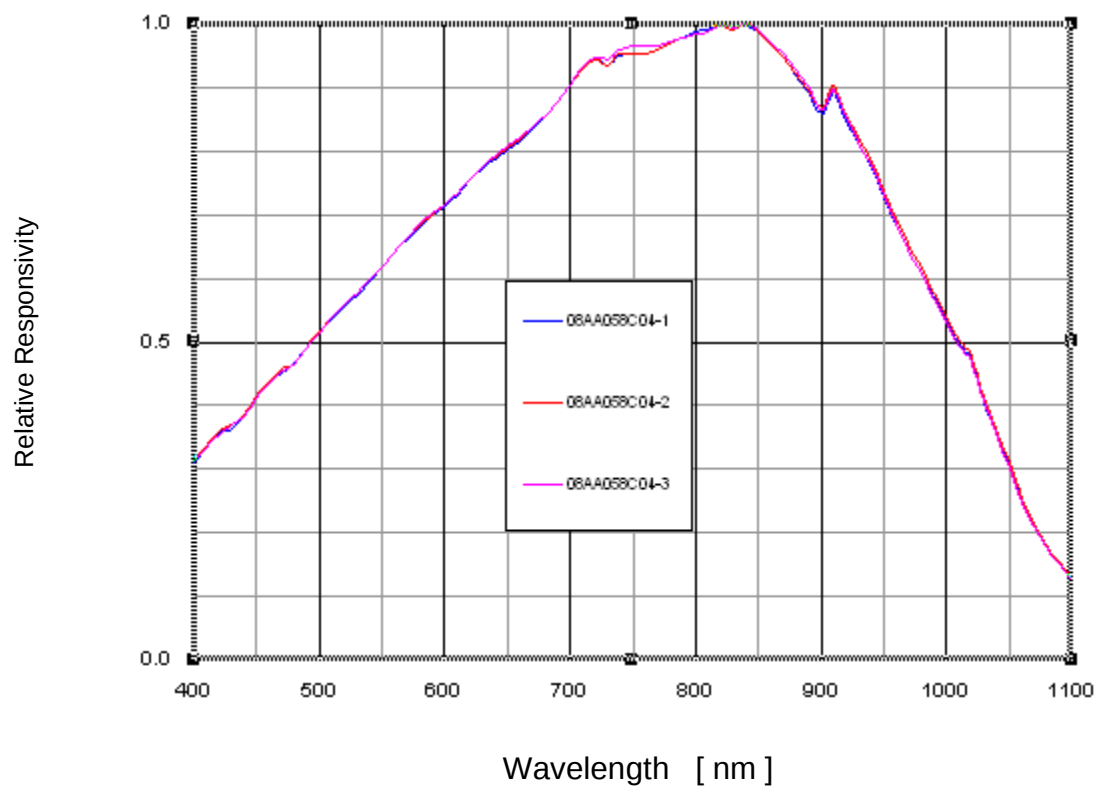
REV. : A

DATE : 11 - Dec. - 2014



PART NO.LPT2043/A-PF				Page 1/5		
Package Dimension				Features		
				. High illumination sensitivity . Stable characteristics . Spectrally and mechanically matched with IR emitter		
				Description		
Note:1.All dimension are in millimeter tolerance is ±0.25mm unless otherwise noted 2.Specifications are subject to change without notice				The LPT2043/A-PF series are silicon nitride passivated NPN planar phototransistors with exceptionally stable characteristics and high illumination sensitivity the cases of LPT2043/A-PF are encapsulated in water clear plastic T1 3/4 package individualt		
• MAXIMUM RATINGS(Ta=25℃)						
PARAMETER				MAXIMUM RATINGS		UNIT
Power Dissipation				100		mw
Collector-Emitter Voltage				30		V
Emitter-Collector Voltage				5		V
Operating Temperature				-50℃ TO +100℃		
Storage Temperature				-50℃ TO +100℃		
• ELECTRICAL CHARACTERISTICS(Ta=25℃)						
PARAMETER	SYMBOL	Min.	Typ.	Max.	UNIT	TEST CONDITION
Collector-Emitter Breakdown Voltage	V(BR)CEO	30			V	Ic=1mA Ee=0mw/cm²
Emitter-Collector Breakdown Voltage	V(BR)ECO	5			V	IE=100 μ A Ee=0mw/cm²
Collector-Emitter Saturation Voltage	VCE(sat)			0.4	V	Ic=0.5mA Ee=20mw/cm²
Rise Time	Tr		5		μ s	VCE=30V IC=800 μ A, RL=1K Ω
Fall Time	Tf		5		μ s	
Collector Dark Current	ICEO			100	nA	VCE=10V Ee=0mw/cm²
On State Collector Current	Ip(on)	1		2	mA	VCE=5v Ee=1mw/cm² λ P=940nm
		2		4	mA	
		4		8	mA	
		8			mA	

Relative Responsivity vs. Wavelength



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

Soldering Iron:30W Max

Temperature 350° C Max

Soldering Time:3 Seconds Max(One time only)

Distance:2mm Min(From solder joint to body)

2.Wave Soldering Profile

Dip Soldering

Preheat: 120° C Max

Preheat time: 60seconds Max

Ramp-up

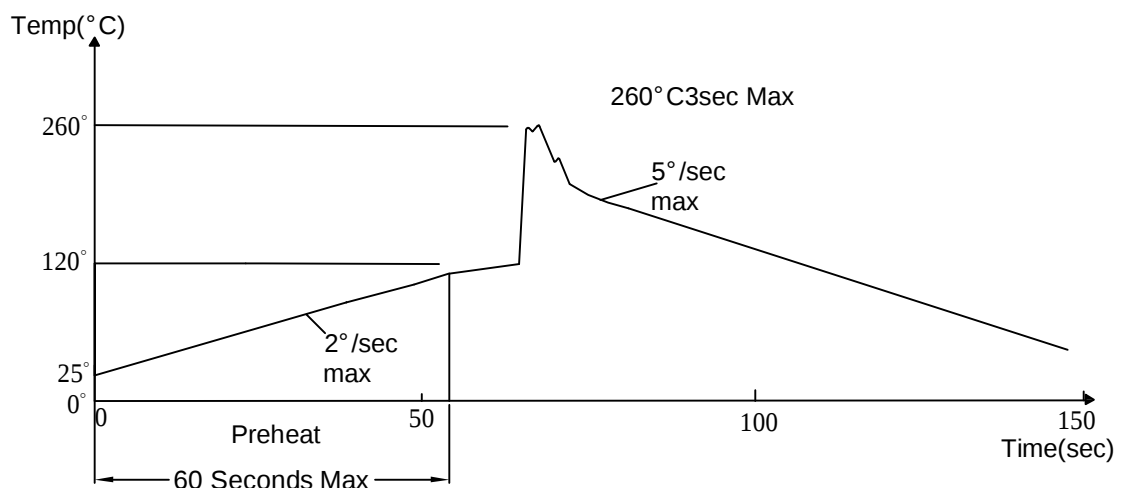
2° C/sec(max)

Ramp-Down:-5° C/sec(max)

Solder Bath:260° C Max

Dipping Time:3 seconds Max

Distance:2mm Min(From solder joint to body)



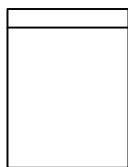
Note: 1.Wave solder should not be made more than one time.

2.You can just only select one of the soldering conditions as above.

Reliability Test:

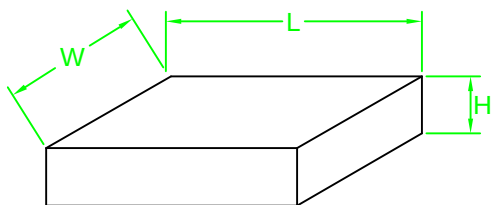
Test Item	Test Condition	Description	Reference Standard
Operating Life Test	1.Under Room Temperature 2.If=20mA 3.t=1000 hrs (-24hrs, +72hrs)	This test is conducted for the purpose of determining the resistance of a part in electrical and thermal stressed.	MIL-STD-750: 1026 MIL-STD-883: 1005 JIS C 7021: B-1
High Temperature Storage Test	1.Ta=85 °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

