



QLPT03DXG



Product Outline:

QLPT03DXG is a Phototransistor, package dimension is square (side detection) , supports 820-940nm wavelength. Works well with QLIR03DXJ (Emitter) as a pair.

Features:

- Supports 850nm - 940nm wavelength
- Water clear lens
- Photo transistor
- 22° Viewing angle ($\pm 10^\circ$)
- RoHS compliant
- Custom Bin available upon special request

Application:

- Electronic signs and electronics board
- IR and PT applications
- Computer Mouse application

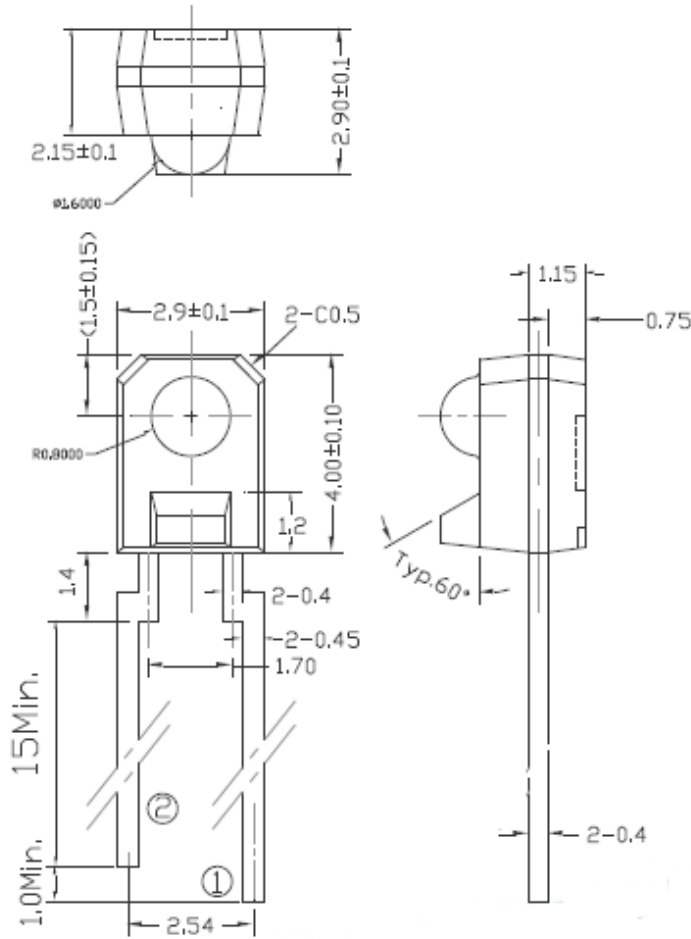
Compliance and Certification:



■ Mechanical Property:



(Dimension)



Pin out: 1. Collector
2. Emitter

Tolerance is $\pm 0.25\text{mm}$ unless otherwise specified

■ ELEMENT APPEARANCE

Model No.	Material	Lighting Color	Resin Color
QLPT03DXG	Silicon	Non-Visible	Water clear



■ ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

Characteristic	Symbol	Rating	Unit
Collector Power Dissipation	Pd	75	mW
C-E Voltage	Vce	30	V
E-C Voltage	Vec	5	V
Operating temperature	Topr	-40 to +85	°C
Storage temperature	Tstg	-40 to +100	°C
Solder Temp	Tsol	260	°C

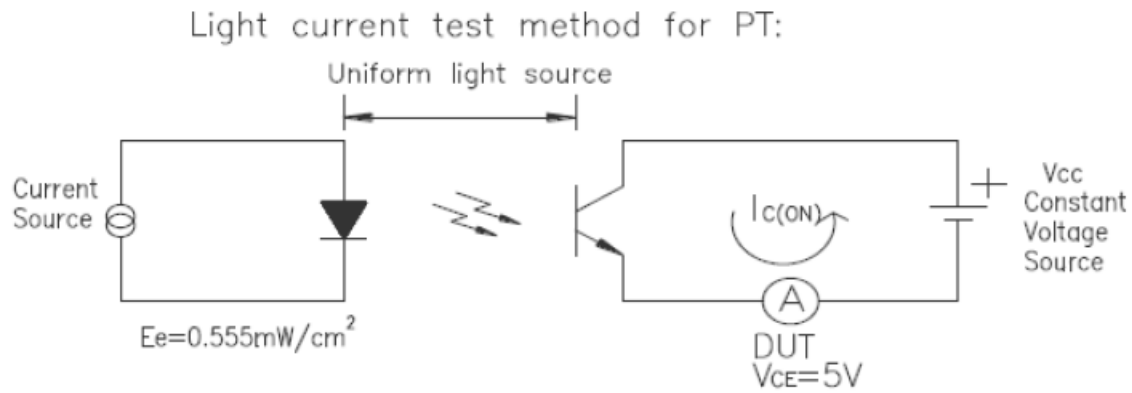
■ ELECTRO-OPTICAL CHARACTERISTICS AT Ta=25°C

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Collector dark current	Iceo	Ee=0mW/cm ² , Vce =20V			100	nA
Forward Voltage	Vf	IF=20mA		1.2	1.5	V
C-E Saturation voltage	Vce(sat)	IC=2mA, IB = 0			0.4	V
C-E Breakdown Voltage	BVceo	IC=100μA, IB=0	30			V
E-C Breakdown voltage	BVeco	Ie=100μA, IB =0	5			V
Viewing angle				22		°
On Stat collector current	IV(on)	Ee=0.555mW/cm ² Vce = 5V	1.5		3.5	mA
Rise Time	Tr	Vce = 5V Ic = 1mA		15		μs
Fall Time	Tf	RL = 1000Ω		15		μs



■ Test method for $I_{c(on)}$:

Condition: $V_{CE}=5V$ $E_e=0.555mW/cm^2$



$I_{c(on)}$ Bin:

uA				
Condition	Code name	Min.	Max.	Unit
$V_{ce}=5V,$ $E_e=$ $0.555mW/cm^2$	B-1	1.5	3.0	mA
	B-2	1.75	3.50	mA

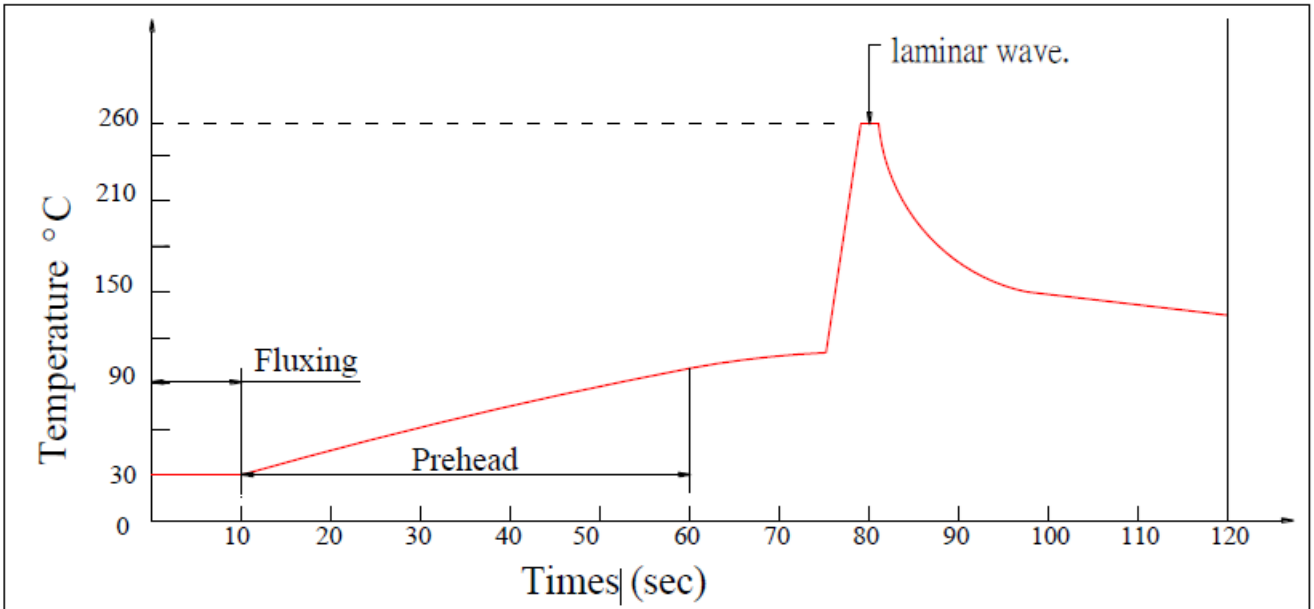


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■ Solder Profile:

-The recommended reflow soldering profile is as follows (temperatures indicated are as measured on the surface of the LED resin):


Shape	Lead Frame Type / Holder Type
Hand soldering	1.Temp.at tip of iron : 300 °C MAX. 2.Soldering time : 3 sec MAX. 3.Distance : 3 mm MIN (from solder joint to case)
DIP soldering	1.Preheat temp : 100 °C MAX , 60 sec MAX. 2.Bath temp : 260 °C MAX. 3.Bath time : 5 sec MAX. 4.Distance : 3 mm MIN (From solder joint to case).
Reflow soldering	NO
Shape	SMD Type
Hand soldering	1.Temp.at tip of iron : 300 °C MAX. 2.Soldering time : 3 sec MAX.
DIP soldering	1.Preheat temp. : 120-150 °C , 60-120 sec. 2.Bath temp. : 260 °C MAX. 3.Bath time : 5 sec
Reflow soldering	1.Preheat temp. : 150-180 °C , 120 sec MAX. 2.Peak temp. : 260 °C MAX. 3.Peak time : 10 sec MAX.






■ Taping & Packing:
Per Bag

Labeling



QueLighting

Quantity: XXXX



Quelighting P/N: XXXXXX



Lot number: XXXXX

Iv Bin: XX

Color Bin: XX

Vf Bin: XX

Date Code: XXXX



Ordering Information:

Part #	Multiple Quantities	Quantity per bag
QLPT03DXG		1000pcs



Revision History:

Revision Date:	Changes:	Version #:
02-11-2019	Initial release	1.0

