QT-Brightek Photo Transistor Series

5mm lamp LED

Part No.: QSD8T120B

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Introduction

Feature:

- Black Color lens
- High photo sensitivity
- Daylight filter
- Photo transistor
- Bulk pack

Description:

This 5mm photo transistor is ideal for applications that require high sensitivity.

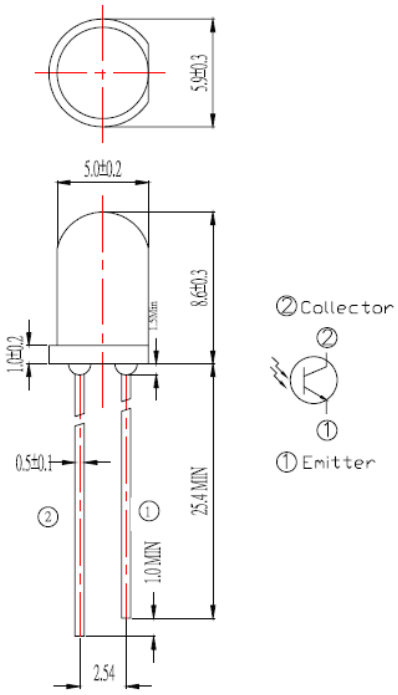
Application:

- Photo copy machines
- Camera
- Printer

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant

Dimension:



Units: mm / tolerance = +/-0.25mm

Electrical / Optical Characteristic (T=25 °C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Peak Sensitivity wavelength	λ_P	-		880		nm
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C = 1mA,	30	-	-	V
Emitter-Collector Breakdown Voltage	BV_{ECO}	I_E = 100 μA,	5	-	-	V
On state collector current	$I_{C(ON)}$	Ee = 0.5mW/cm², V_{CE} = 5V	4.5	-	15	mA
Collector Emitter dark current	I_{CEO}	Ee = 0 V_{CE} = 10V	-	-	100	nA
Collector-Emitter saturation voltage	$V_{CE(sat)}$	Ee = 0.5mW/cm², I_C = 0.5 mA	-	-	0.4	V
Rise time	t_r	V_{CE} = 5V R_L = 100Ω I_C=0.2mA	-	7	-	us
Fall time	t_f					
Viewing Angle	21/2Θ	-	-	30	-	deg

Absolute Maximum Rating

Type	P_d (mW) (at or below 25 °C)	V_{CEO} (V)	V_{ECO} (V)	I_C (mA)	T_{OP} (°C)	T_{ST} (°C)	T_{solder} (°C)*
Photo Transistor	100	30	5	20	-40 to + 100	-40 to +100	260

* wave solder for no more than 5 sec @ 260 °C

Characteristic Curves

AlGaAs

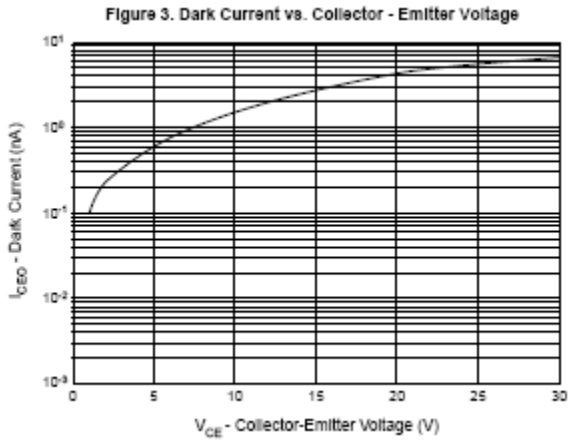


Fig.4 Collector Current vs. Irradiance

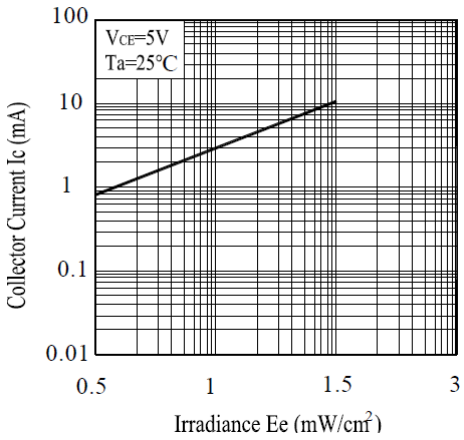


Fig.5 Collector Dark Current vs. Ambient Temperature

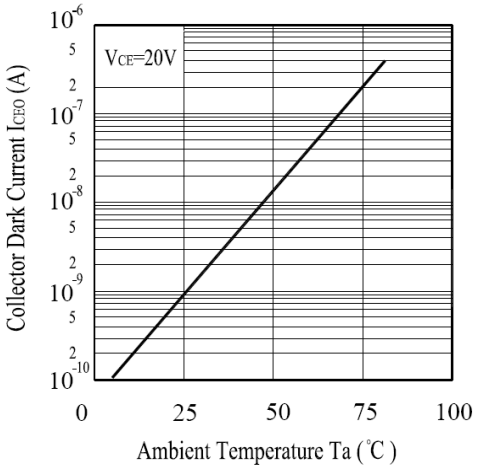
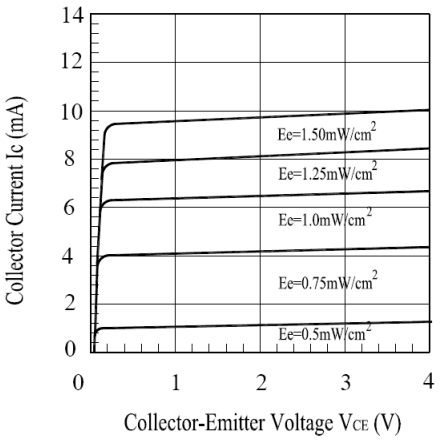


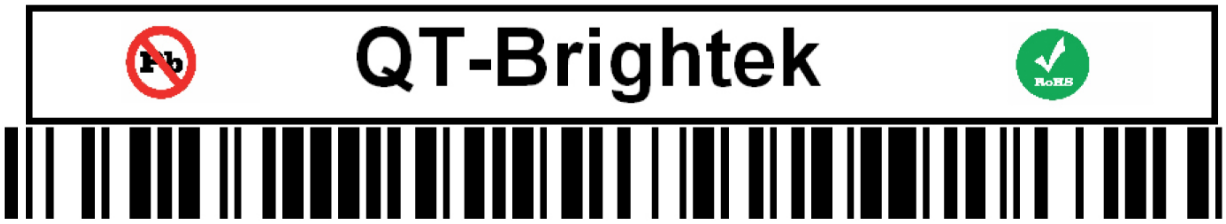
Fig.6 Collector Current vs. Collector-Emitter Voltage



Packing

Bulk pack 500pcs

Labeling



Part No:

Customer Lot No:

Item:

Q'ty:

PT Ic(ON)

Date:

ROHS PASS

Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per bag
QSD8T120B	QSD8T120B	Ic(on) = 4.5 mA min.	500 units

Revision History

Description:	Revision #	Revision Date
New Release of QSD8T120B	V1.0	06/25/2011
Update format	V1.1	06/03/2013
Update spec	V2.0	09/22/2014

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