



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



QT-Brightek Lamp Series
3mm Photo transistor Lamp
Part No.: QSC5T50B

Product: QSC5T50B	Date: May 08, 2014	Page 1 of 7
	Version# 1.0	

Table of Contents:

Introduction	3
Electrical / Optical Characteristic (Ta=25 °C)	4
Absolute Maximum Rating	4
Characteristic Curves.....	5
Ordering Information	6
Revision History	7
Disclaimer	7

Introduction

Feature:

- Black lens
- Packed in bulk
- 3mm round type thru hole lamp
- Daylight filter
- 50° receiving angle

Description:

These 3mm round type lamps with 5.32 mm lens height are suitable for infrared applied application

Application:

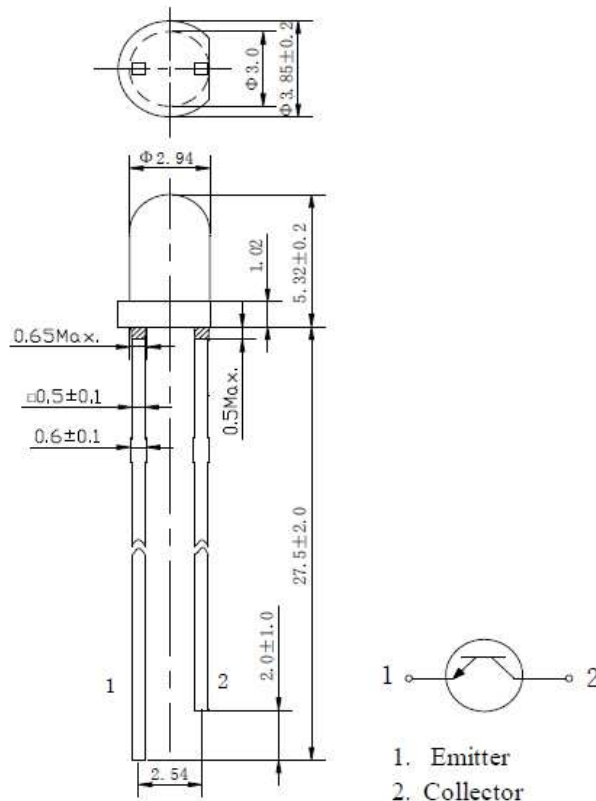
- photo copy machines
- Camera
- Printer

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.2mm

Electrical / Optical Characteristic (Ta=25 °C)

Parameter	Symbol	Output			Units	Test Conditions
		Min	Typ	Max		
Spectra Bandwidth	$\lambda_{0.5}$	700	-	1100	nm	-
Peak Sensitivity wavelength	λ_P	-	940	-	nm	-
Collector-Emitter Breakdown Voltage	BV_{CEO}	30	-	-	V	$I_C=0.5mA$ $E=0mW/cm^2$
Emitter-Collector Breakdown Voltage	BV_{ECO}	5	-	-	V	$I_E=0.1mA$ $E=0mW/cm^2$
On state collector current	$I_{C(ON)}$	2000	3600	5500	μA	$V_{CE}=3.3V$, $E=2mW/cm^2$ $\lambda=940nm$
Collector dark current	I_{CEO}	-	-	100	nA	$V_{CE}=10V$ $E=0mW/cm^2$
Collector-Emitter saturation voltage	$V_{CE(sat)}$		0.2	0.4	V	$I_E=0.1mA$ $E=0.5mW/cm^2$
Rise time	t_r	-	10	-	μS	$V_{CE}=3.3V$, $I_C=1mA$ $R_L=1000\Omega$
Fall time	t_f					

Absolute Maximum Rating

P_d (mW)	V_{CEO} (V)	V_{ECO} (V)	I_C (mA)	T_{OP} (°C)	T_{ST} (°C)
100	30	5	50	-40 to +85	-40 to +85

Wave Soldering for no more than 5 sec @ 260 °C

On State collector current $I_{C(ON)}$ @ $V_{CE}=3.3V$, $E=2mW/cm^2$, $\lambda=940nm$

Bin	Min.	Max.	Unit
1	2000	3200	μA
2	3200	4500	
3	4500	5500	

Characteristic Curves

AlGaAs/GaAs

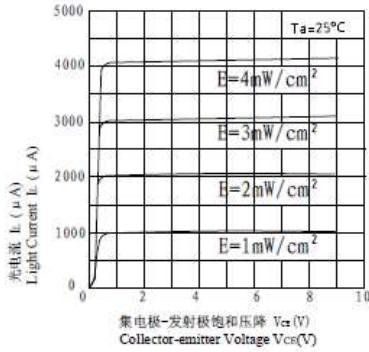
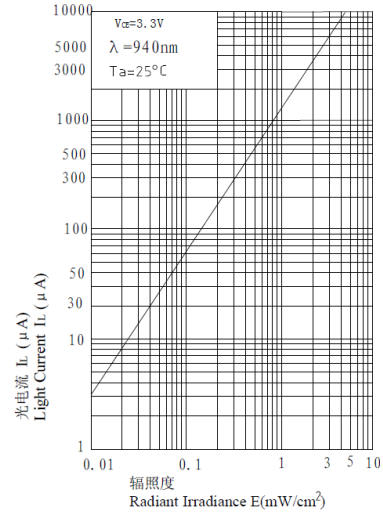


Fig.1 Light Current vs. Collector-emitter Voltage



Light Current vs. Irradiance

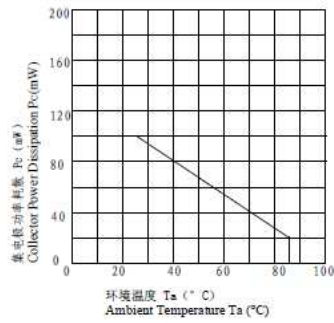


Fig.3 Collector Power Dissipation vs. Ambient Temperature

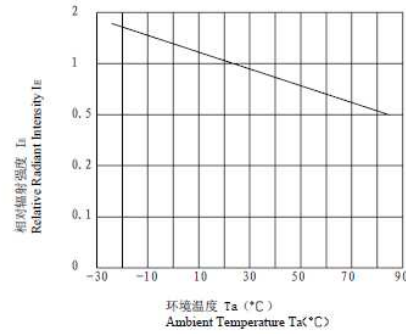


Fig.4 Relative Radiant Intensity vs. Ambient Temperature

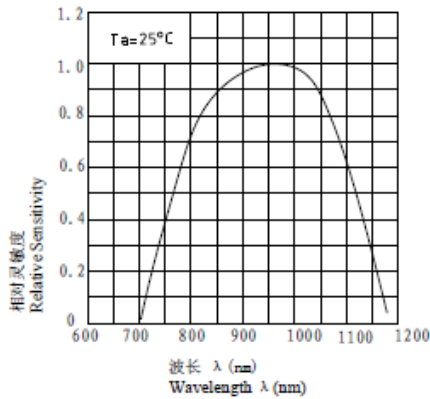


Fig.5 Relative Sensitivity vs. Wavelength

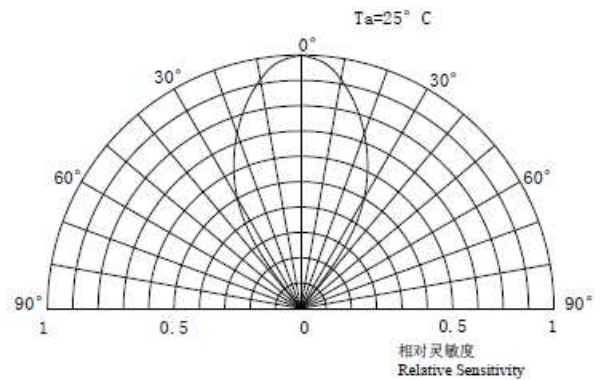


Fig.6 Relative Directional Sensitivity

Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per bag
QSC5T50B	QSC5T50B	$\lambda_p=940\text{nm}$ Typ.	500

Revision History

Description:	Revision #	Revision Date
New Release of QSC5T50B	V1.0	05/08/2015

Disclaimer

QT-BRIGHTTEK reserves the right to make changes without further notice to any products herein to improve reliability, function or design. QT-BRIGHTTEK does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights, nor the rights of others.

Life Support Policy

QT-BRIGHTTEK's products are not authorized for use as critical components in life support devices or systems without the express written approval of QT-BRIGHTTEK. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.