QT-Brightek Chip LED Series

0402 IR LED

Part No.: QBLP595-IR1

IR1: 940nm

Table of Contents:

Introduction 3
Electrical / Optical Characteristic (Ta=25 ºC) 4
Absolute Maximum Rating 4
Characteristic Curves 5
Solder Profile & Footprint 6
Packing 7
Labeling 8
Ordering Information 8
Revision History 9
Disclaimer 9

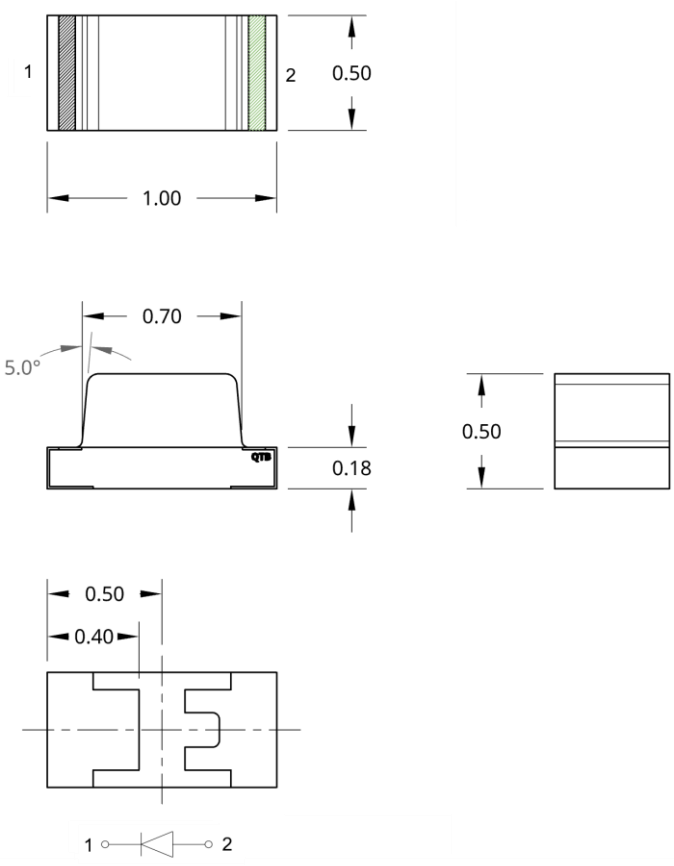
Introduction

Feature:
- Water clear lens
- Package in tape and reel
- 0402 LED package
- Viewing Angle = 140 deg typ.
- Height profile: 0.5mm

Application:
- Infrared Sensor
- Optoelectronic Switch
- Smoke detector
- Drive sensor

Certification & Compliance:
- ISO9001
- RoHS Compliant

Dimension:



Units: mm / tolerance = +/-0.1mm

Electrical / Optical Characteristic (Ta=25 °C)

Product	Color	I_F (mA)	V_F (V)		λ_P (nm)			Ie (mW/sr)	
			Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.
QBLP595-IR1	Infrared	20	1.2	1.6	930	940	960	0.2	0.6

Absolute Maximum Rating

Chip Material	P_d (mW)	I_F (mA)	I_{FP} (mA)*	V_R (V)	T_{OP} (°C)	T_{ST} (°C)	T_{SOL} (°C)**
AlGaAs	80	50	800	5	-40 ~ +80	-40 ~ +85	260

*Duty cycle=1%, Pulse width 100μs
**IR Reflow for no more than 10 sec @ 260 °C

Forward Voltage V_F @ I_F=20mA

Bin	Min.	Max.	Unit
☐	0.80	1.60	V

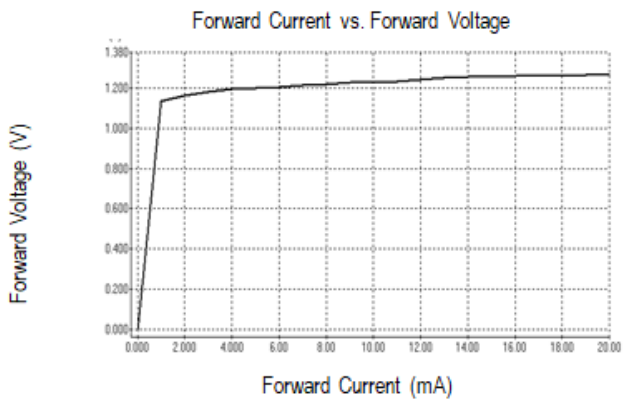
Radiant Intensity I_E @ I_F=20mA

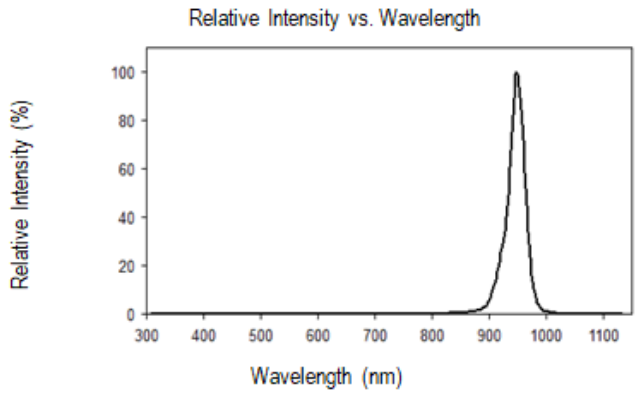
Bin	Min.	Max.	Unit
A	0.20	0.60	mW/sr
B	0.60	1.10	
C	1.10	1.60	

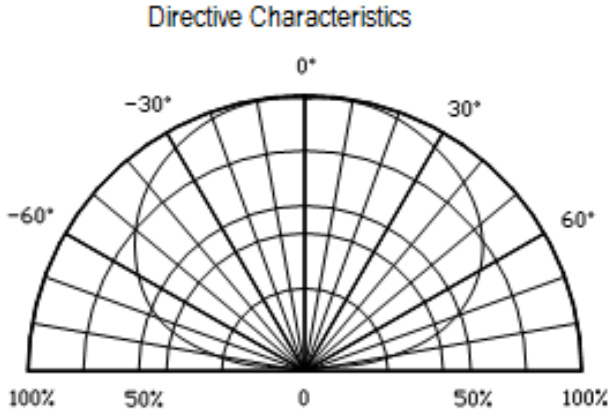
Peak Wavelength λ_P @ I_F=20mA

Bin	Min.	Max.	Unit
☐	930	960	nm

Characteristic Curves

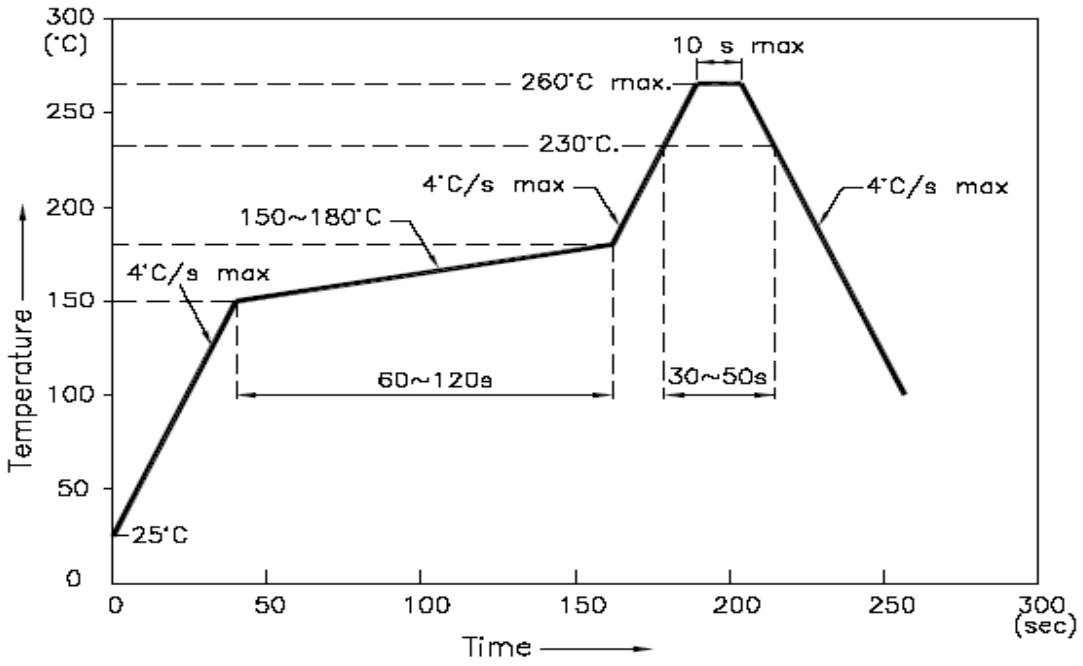




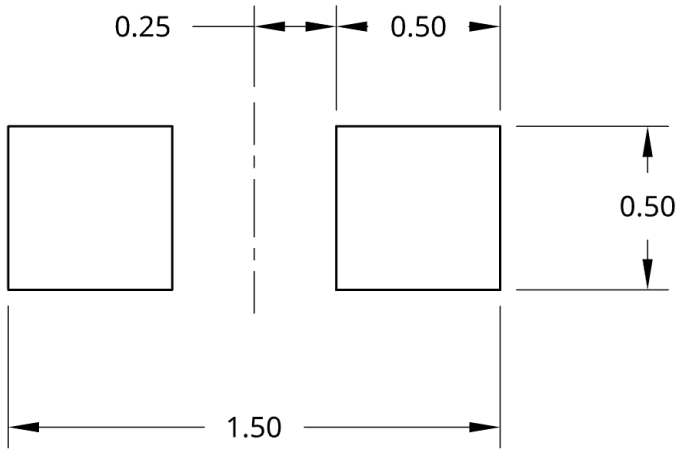


Solder Profile & Footprint

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



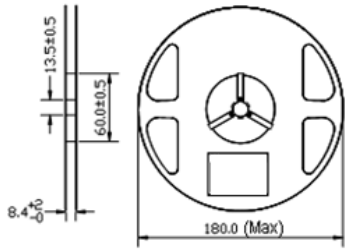
Recommended Pad Layout



Units: mm

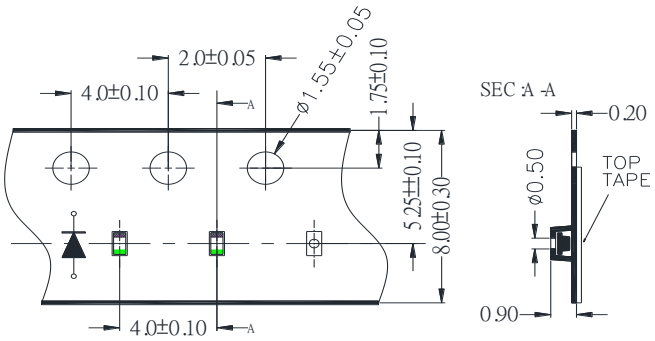
Packing

Reel Dimension:



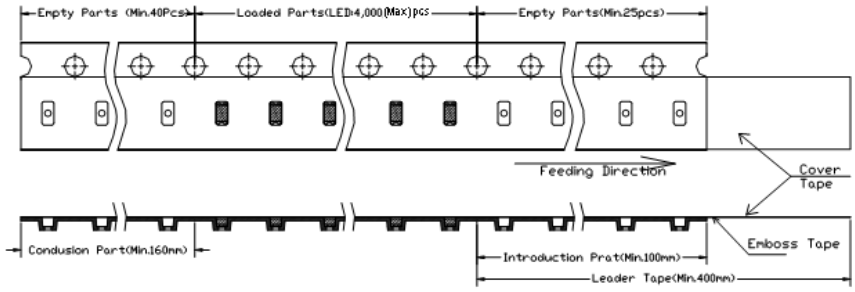
Unit: mm

Tape Dimension:

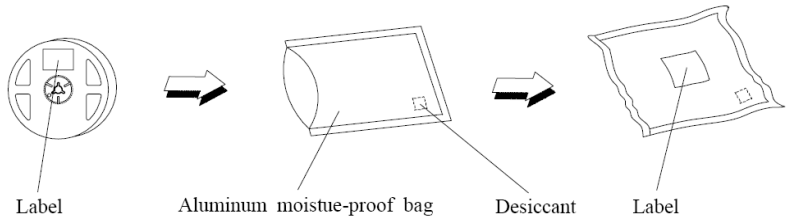


Unit: mm

Arrangement of Tape:



Packaging Specification:



Labeling



Ordering Information

Orderable Part #	Spec Range	Quantity per reel
QBLP595-IR1	Ie=0.6mW/sr typ. / λ_P=940nm typ. @ I_F=20mA	5,000 units

Revision History

Description:	Revision #	Revision Date
New Release of QBLP595-IR1	V1.0	11/16/2021
Update peak wavelength range	V1.1	12/10/2021
Drawing redrafted for clarity and documentation consistency; no changes to form, fit, or function.	V1.2	02/13/2026

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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.