

# **QT-Brightek Metal Can Series**

## **TO-46 Package**

**Part No.: F5DX**

**X= 1, 2 or 3**

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## Introduction

**Feature:**

- TO-46 Package
- Narrow viewing angle: 16°
- Enhanced temperature range
- AlGaAs

**Description:**

This infrared emitter is designed for applications requiring high output.

**Application:**

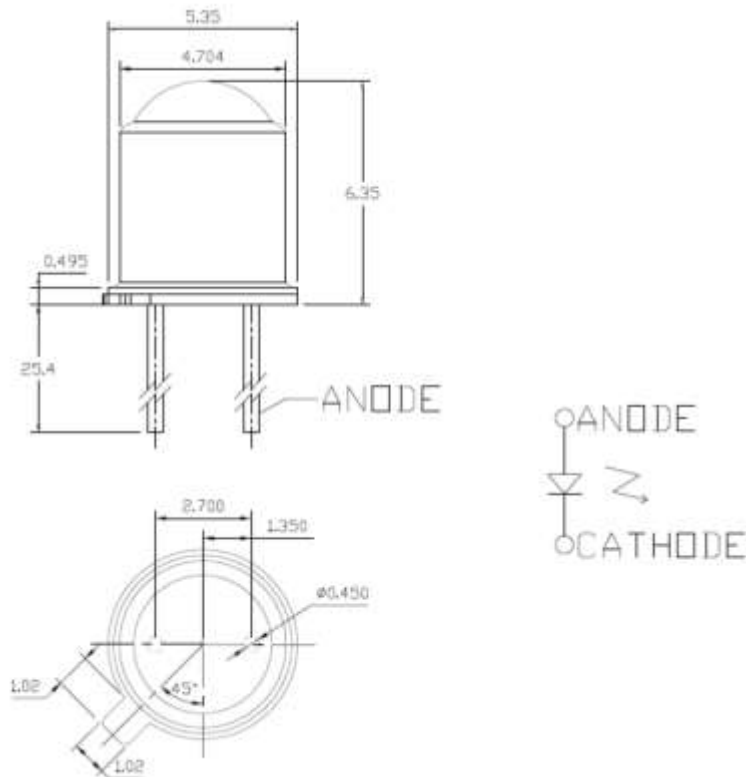
- Infrared applied system
- Optoelectronic switch
- Sensing system

**Certification & Compliance:**

- TS16949
- ISO9001
- RoHS Compliant



**Dimension:**



Units: mm / tolerance = +/-0.2mm

### Electrical / Optical Characteristic (T=25 °C)

Parameter	Symbol	Output			Units	Test Conditions
		Min	Typ	Max		
Total Power F5D1	P <sub>O</sub>	12.0	--	--	mW	I <sub>F</sub> =100mA
Total Power F5D2	P <sub>O</sub>	9.0	--	--	mW	I <sub>F</sub> =100mA
Total Power F5D3	P <sub>O</sub>	10.5	--	--	mW	I <sub>F</sub> =100mA
Peak Wavelength	λ <sub>P</sub>	--	880	--	nm	I <sub>F</sub> =100mA
Forward Voltage	V <sub>F</sub>	--	--	1.7	V	I <sub>F</sub> =100mA
Reverse Current	I <sub>R</sub>	--	--	10	μA	V <sub>R</sub> =5V
Viewing Angle	2 θ <sub>1/2</sub>	-	16	-	deg	I <sub>F</sub> =100mA
Rise time	t <sub>r</sub>	-	1.5	-	μS	-
Fall time	t <sub>f</sub>					

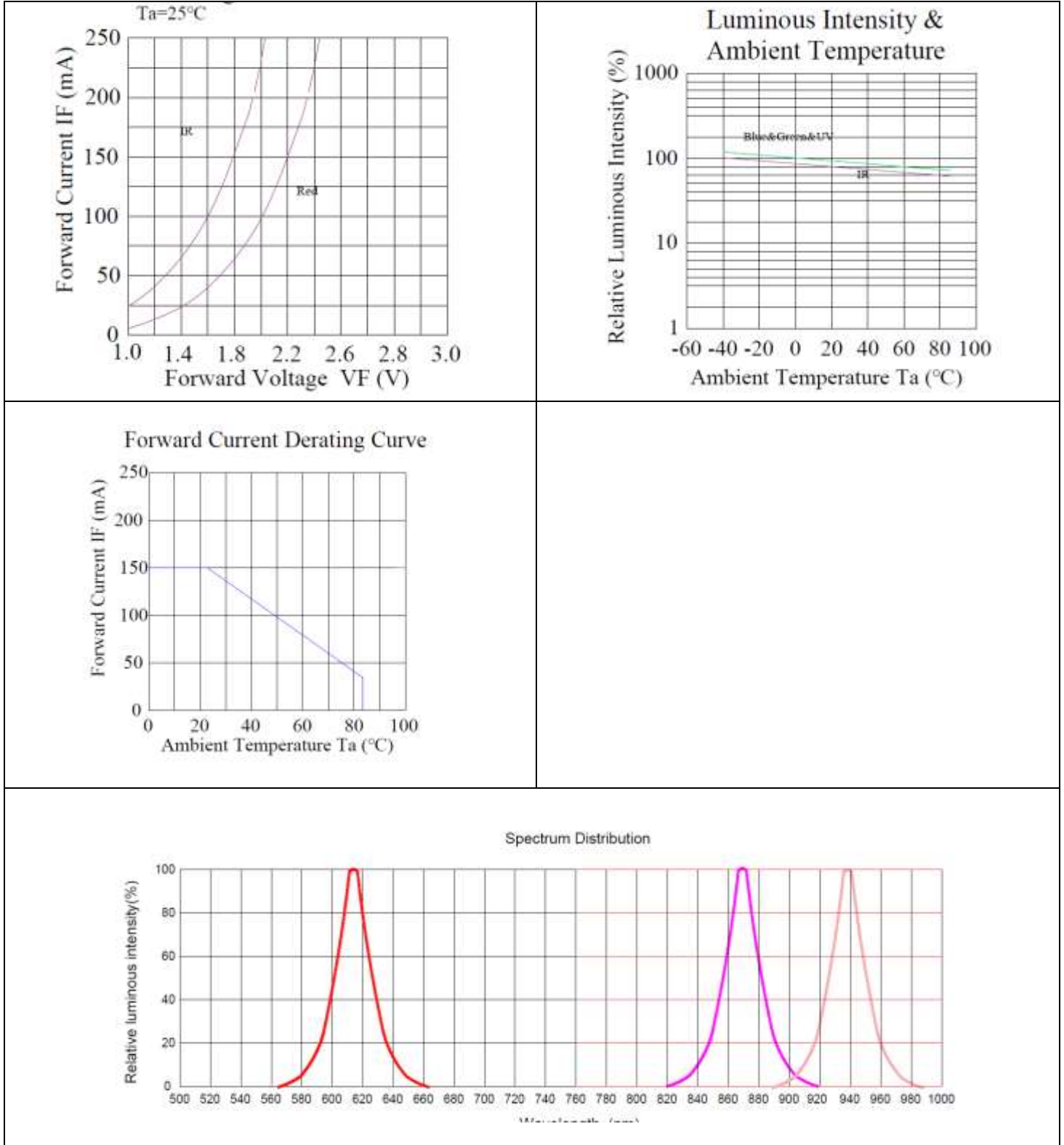
### Absolute Maximum Rating

Material	P <sub>d</sub> (mW)	I <sub>F</sub> (mA)	I <sub>FP</sub> * (A)	V <sub>R</sub> (V)	T <sub>OP</sub> (°C)	T <sub>ST</sub> (°C)
AlGaAs	170	100	10	3	-65 to + 125	-65 to +150

\*pw, 1us; 200Hz

\*\* Soldering for no more than 10 sec @ 260 °C

## Characteristic Curves



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## Packing

Packaging Specifications: TBD

## Ordering Information

Part #	Orderable Part #	Spec Range	Quantity per bag
F5D1	F5D1	Po=12.0mW @ IF=100mA	--
F5D2	F5D2	Po=9.0mW @ IF=100mA	--
F5D3	F5D3	Po=10.5mW @ IF=100mA	--

## Revision History

Description:	Revision #	Revision Date
New Release of F5DX series	V1.0	12/12/2016
Amend the Graph	V1.1	09/20/2018

## Disclaimer

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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.

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