

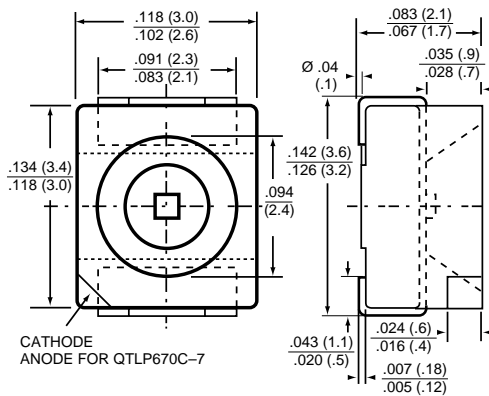
HIGH EFFICIENCY RED
YELLOW

QTLP670C-2
QTLP670C-3

GREEN
AlGaAs RED

QTLP670C-4
QTLP670C-7

PACKAGE DIMENSIONS



NOTE: ALL DIMENSIONS ARE IN INCHES (mm)

DESCRIPTION

The QT Optoelectronics surface mount lamps are designed with a flat top and sides for automatic placement equipment. They are compatible with convective IR and vapor phase reflow soldering and conductive epoxy attachment process.

The package size and configuration conform to the EIA-535 BAAC standard specification for case 3528 tantalum capacitor.

FEATURES

- Non-diffused package for backlighting and coupling to light pipe
- Low package profile
- Low power dissipation
- Wide viewing angle

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ Unless otherwise specified)

| QTLP | HER 670C-2 | Yellow 670C-3 | Green 670C-4 | AlGaAs Red 670C-7 | Units |
|---|--------------------|------------------|-----------------|----------------------|-------|
| DC forward current, I_F | 30 | 20 | 30 | 30 | mA |
| Operating temperature range | -40° C to +85° C | | | | |
| Storage temperature range | -40° C to +100° C | | | | |
| Lead soldering time | 5 seconds @ 260° C | | | | |
| Peak forward current ¹ , I_F | 160 | 160 | 160 | 200 | mA |
| Power dissipation P_d (mW) | 100 | 100 | 100 | 100 | mW |
| Reversed Voltage (V_R) | 5 | 5 | 5 | 5 | V |

Notes:

1. Measured @ $f=1.0$ kHz, Duty factor = 1/10

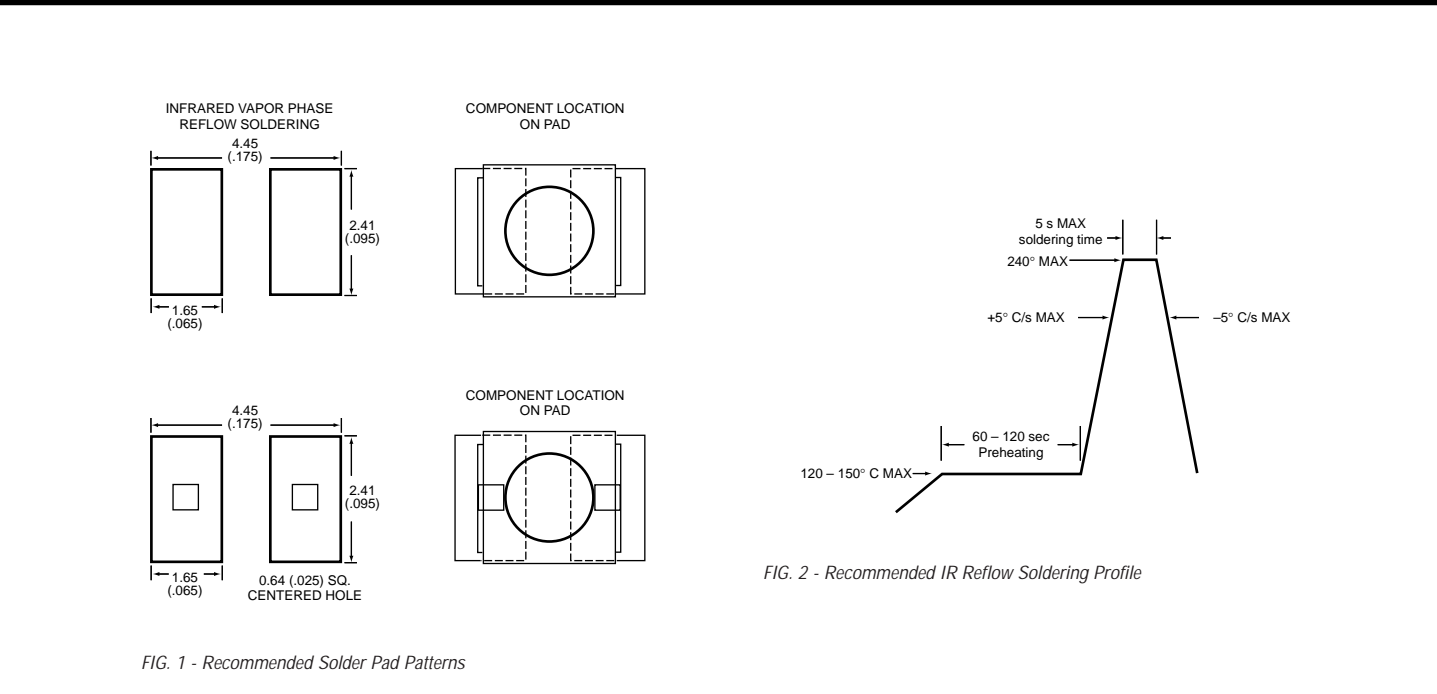
HER = High Efficiency Red

ELECTRO-OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless otherwise specified)

INDIVIDUAL COMPONENT CHARACTERISTICS

| QTLP | HER 670C-2 | YELLOW 670C-3 | GREEN 670C-4 | AlGaAs RED 670C-7 | UNITS | TEST CONDITIONS |
|---------------------------|---------------|------------------|-----------------|-------------------------|-------|----------------------|
| LUMINOUS INTENSITY | | | | | | |
| minimum | 6 | 6 | 15 | 25 | mcd | $I_F = 20\text{ mA}$ |
| typical | 10 | 10 | 25 | 40 | mcd | |
| FORWARD VOLTAGE | | | | | | |
| minimum | 1.7 | 1.7 | 1.7 | 1.5 | V | $I_F = 20\text{ mA}$ |
| typical | 2.0 | 2.0 | 2.1 | 1.7 | V | |
| maximum | 2.8 | 2.8 | 2.8 | 2.4 | V | |
| PEAK WAVELENGTH | 635 | 585 | 570 | 660 | nm | $I_F = 20\text{ mA}$ |
| SPECTRAL LINE HALF WIDTH | 45 | 35 | 30 | 20 | nm | |
| VIEWING ANGLE | 120° | 120° | 120° | 120° | | |

SOLDERING



Notes:
All dimensions are in millimeters (inches).
HER = High Efficiency Red

TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES ($T_A = 25^\circ \text{C}$)

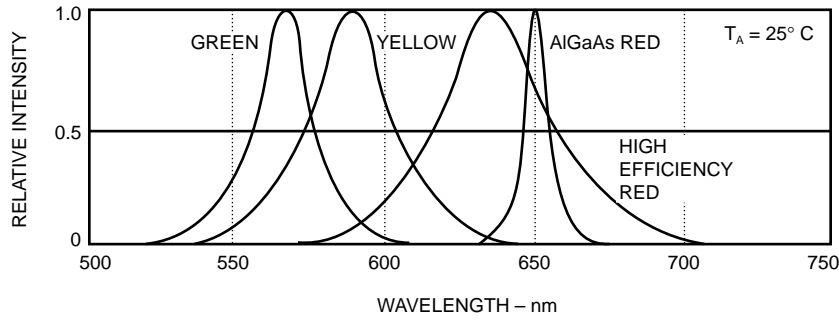


FIG. 3 - Relative Intensity vs. Wavelength

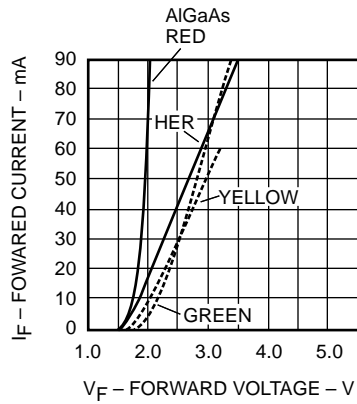


FIG. 4 - Forward Current vs. Forward Voltage

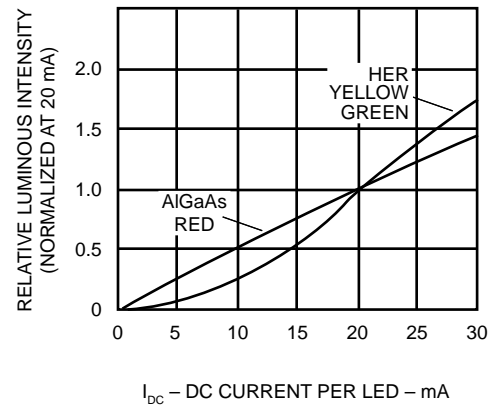


FIG. 5 - Relative Luminous Intensity vs. Forward Current

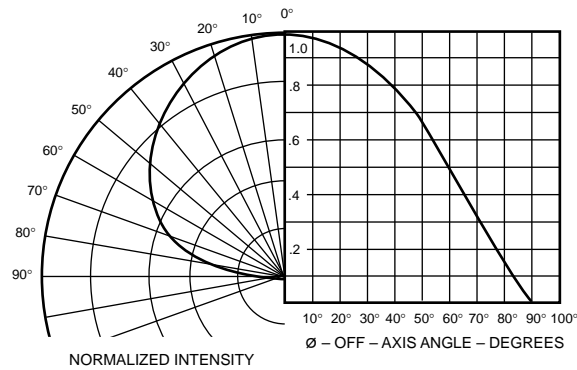
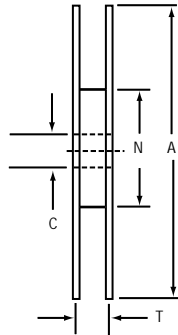
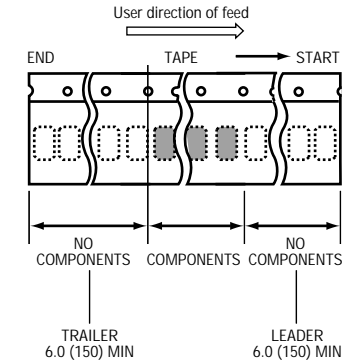


FIG. 6 - Relative Intensity vs. Angular Displacement

8 MM TAPE AND REEL



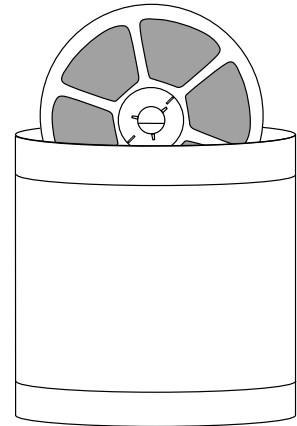
Dimensions per ANSI/EIA Standard RS-481
All dimensions are in millimeters.

| | |
|---|--------------------------------|
| A | 7.08 (180) 6.92 (176) |
| C | 0.73 (18.5) 0.69 (17.5) DIA |
| N | 3.19 (81) 3.11 (79) |
| T | .45 (11.5) .33 (8.5) |

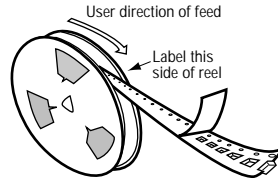
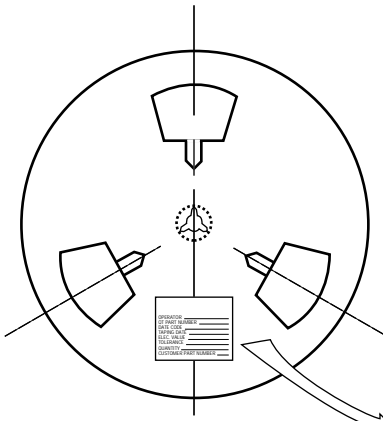
Thickness of top cover tape
.004 (10) MAX

NOTES:

1. All dimensions are in inches (mm).
2. Quantity/Reel: 2,000
3. When ordering tape and reel parts, add suffix ".TR" to part number.



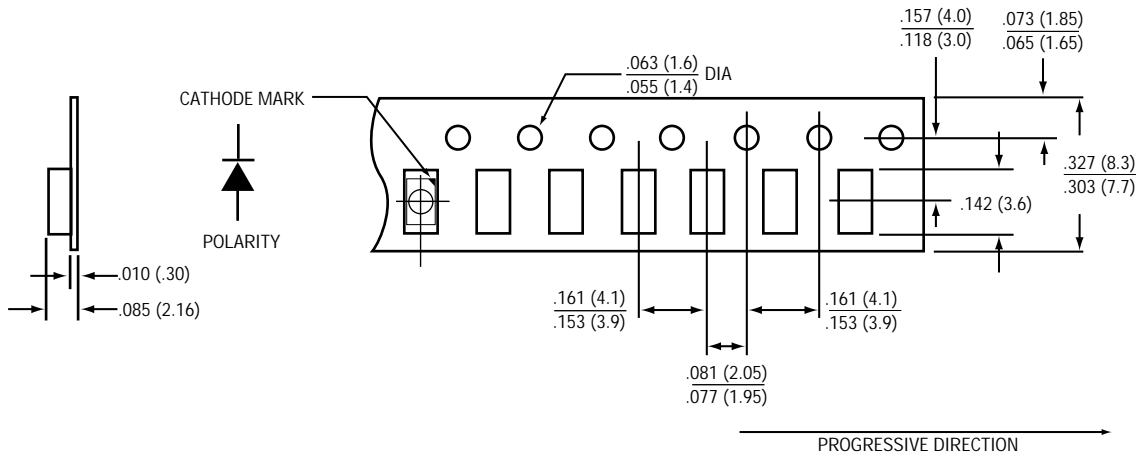
Components are packed in a heat-sealed, moisture-proof aluminum bag.



QT
OPTOELECTRONICS

OPERATOR _____
 QT PART NUMBER _____
 DATE CODE _____
 TAPING DATE _____
 ELEC. VALUE _____
 TOLERANCE _____
 QUANTITY _____
 CUSTOMER PART NUMBER _____

TAPE DIMENSIONS



Call QT Optoelectronics for more information or the phone number of your nearest distributor.

United States 800-533-6786 • France 33 1/43.99.25.12 • Germany 49 089/96.30.51 • United Kingdom 44 [0] 1296/39.44.99 • Asia/Pacific 603/735-2417