FAIRCHILD
SEMICONDUCTOR®

SURFACE MOUNT LED LAMP
SUPER BRIGHT 0603 (0.8 mm Height)

QTLP600C-R Red

QTLP600C-E Orange

QTLP600C-O Yellow-Orange

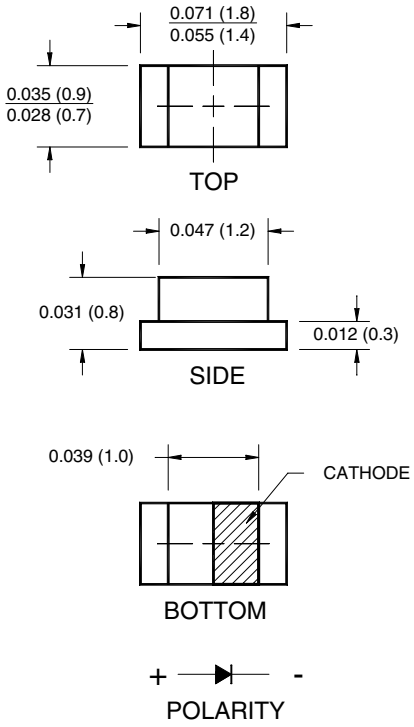
QTLP600C-Y Yellow

QTLP600C-AG Yellow-Green

QTLP600C-IG True Green

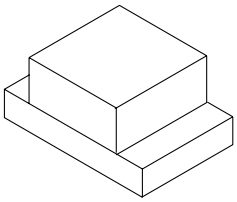
QTLP600C-IB Blue

PACKAGE DIMENSIONS



NOTE:

Dimensions for all drawings are in inches (mm).



APPLICATIONS

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

DESCRIPTION

These surface mount chip LEDs are designed to fit industry standard footprint. Small size, low profile and wide viewing angle make these LEDs ideal choices for backlighting applications and panel illumination.

FEATURES

- Small footprint - 1.6(L) X 0.8(W) X 0.8(H) mm
- AlInGaP technology for -R, -E, -O, -Y and -AG
- InGaN/SiC technology for -IG and -IB
- Wide viewing angle of 100°
- Water clear optics
- Moisture-proof packaging
- Available in 0.315” (8mm) width tape on 7” (178mm) diameter reel; 2,000 units per reel

© 2001 Fairchild Semiconductor Corporation

SURFACE MOUNT LED LAMP
SUPER BRIGHT 0603 (0.8 mm Height)

QTLP600C-R Red

QTLP600C-E Orange

QTLP600C-O Yellow-Orange

QTLP600C-Y Yellow

QTLP600C-AG Yellow-Green

QTLP600C-IG True Green

QTLP600C-IB Blue

ABSOLUTE MAXIMUM RATINGS (T_A =25°C Unless otherwise specified)

Parameter	Symbol	QTLP600C					Units
		-R	-E	-O	-Y	-AG	
Continuous Forward Current	I_F	30	30	30	25	30	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I_{FM}	160	160	160	120	160	mA
Reverse Voltage	V_R	5	5	5	5	5	V
Power Dissipation	P_D	72	72	72	60	72	mW
Operating Temperature	T_{OPR}	-40 to +85					°C
Storage Temperature	T_{STG}	-40 to +90					°C
Lead Soldering Time	T_{SOL}	260 for 5 sec					°C

ABSOLUTE MAXIMUM RATINGS (T_A =25°C Unless otherwise specified)

Parameter	Symbol	QTLP600C		Units
		-IB	-IG	
Continuous Forward Current	I_F	30	30	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I_{FM}	100	100	mA
Reverse Voltage	V_R	5	5	V
Power Dissipation	P_D	120	120	mW
Operating Temperature	T_{OPR}	-40 to +85		°C
Storage Temperature	T_{STG}	-40 to +90		°C
Lead Soldering Time	T_{SOL}	260 for 5 sec		°C

FAIRCHILD
SEMICONDUCTOR®

SURFACE MOUNT LED LAMP
SUPER BRIGHT 0603 (0.8 mm Height)

QTLP600C-R Red

QTLP600C-E Orange

QTLP600C-O Yellow-Orange

QTLP600C-Y Yellow

QTLP600C-AG Yellow-Green

QTLP600C-IG True Green

QTLP600C-IB Blue

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

Part Number	Symbol	QTLP600C					Condition
		-R	-E	-O	-Y	-AG	
Luminous Intensity (mcd)							
Minimum	I_V	15	15	15	15	10	I_F = 20mA
Typical		35	35	35	35	15	
Forward Voltage (V)							
Maximum	V_F	2.4	2.4	2.4	2.4	2.4	I_F = 20mA
Typical		2.0	2.0	2.0	2.0	2.0	
Wavelength (nm)							
Peak	λ_P	630	620	610	590	575	I_F = 20mA
Dominant	λ_D	624	615	605	589	573	
Spectral Line Half Width (nm)	$\Delta\lambda$	20	18	18	15	20	I_F = 20mA
Viewing Angle (°)	$2\Theta_{1/2}$	100	100	100	100	100	I_F = 20mA

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

Part Number	Symbol	QTLP600C		Condition
		-IB	-IG	
Luminous Intensity (mcd)				
Minimum	I_V	15	70	I_F = 20mA
Typical		25	110	
Forward Voltage (V)				
Maximum	V_F	4.0	4.0	I_F = 20mA
Typical		3.5	3.5	
Wavelength (nm)				
Peak	λ_P	465	520	I_F = 20mA
Dominant	λ_D	470	525	
Spectral Line Half Width (nm)	$\Delta\lambda$	25	35	I_F = 20mA
Viewing Angle (°)	$2\Theta_{1/2}$	100	100	I_F = 20mA

FAIRCHILD
SEMICONDUCTOR®

SURFACE MOUNT LED LAMP
SUPER BRIGHT 0603 (0.8 mm Height)

QTLP600C-R Red
QTLP600C-E Orange
QTLP600C-O Yellow-Orange
QTLP600C-Y Yellow
QTLP600C-AG Yellow-Green
QTLP600C-IG True Green
QTLP600C-IB Blue

TYPICAL PERFORMANCE CURVES (QTLP600C-R, -E, -O, -Y and -AG)

Fig. 1 Forward Current vs. Forward Voltage

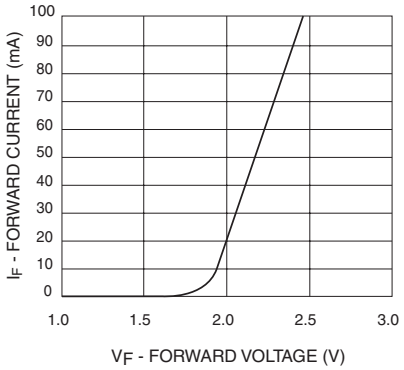


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

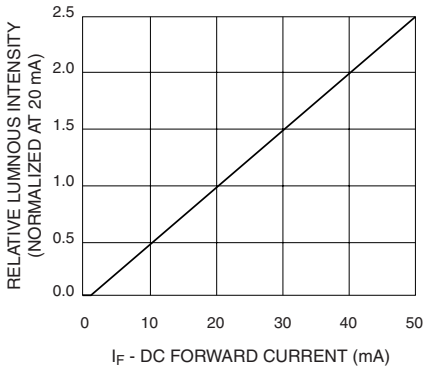


Fig. 3 Relative Intensity vs. Peak Wavelength

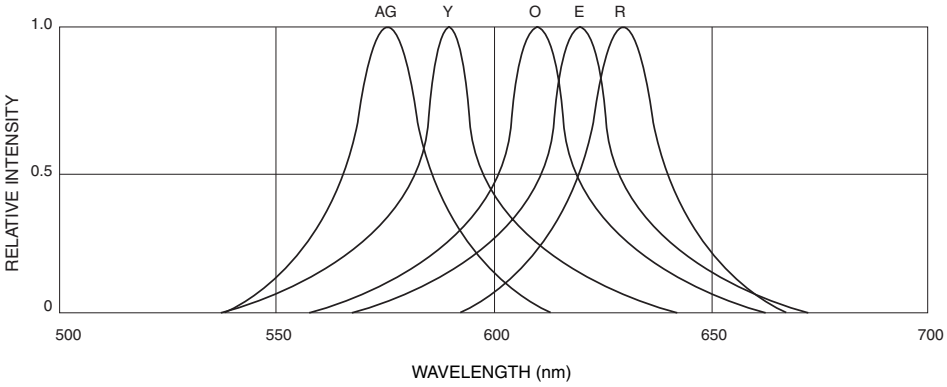


Fig.4 Radiation Diagram

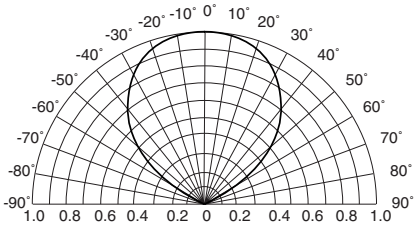
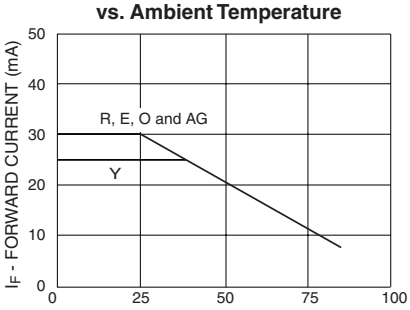


Fig.5 Maximum Forward Current vs. Ambient Temperature



FAIRCHILD
SEMICONDUCTOR®

SURFACE MOUNT LED LAMP
SUPER BRIGHT 0603 (0.8 mm Height)

QTLP600C-R Red

QTLP600C-E Orange

QTLP600C-O Yellow-Orange

QTLP600C-Y Yellow

QTLP600C-AG Yellow-Green

QTLP600C-IG True Green

QTLP600C-IB Blue

TYPICAL PERFORMANCE CURVES (QTLP600C-IG and IB)

Fig. 1 Forward Current vs. Forward Voltage

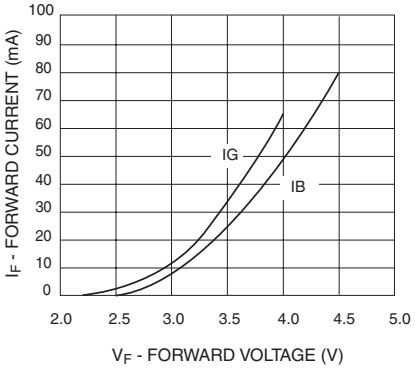


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

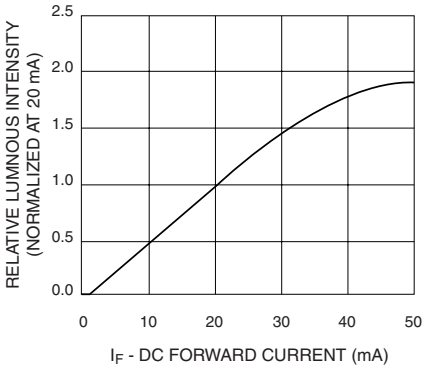


Fig. 3 Relative Intensity vs. Peak Wavelength

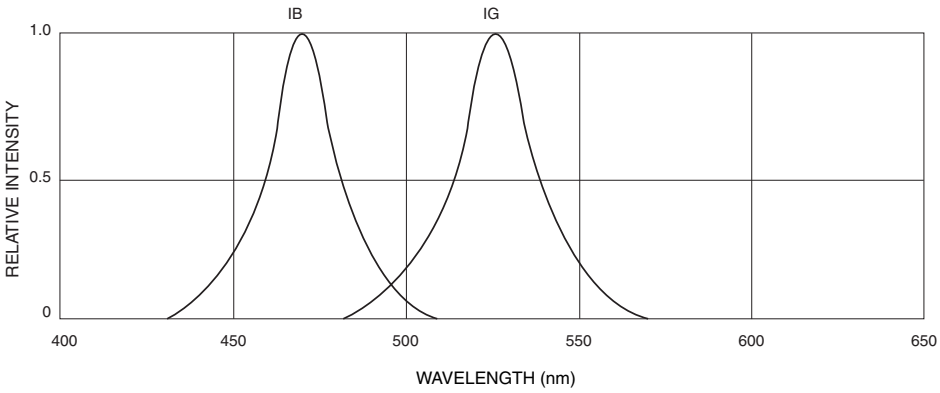


Fig.4 Radiation Diagram

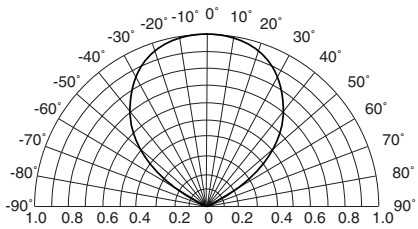
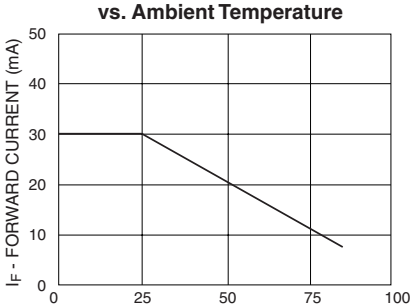


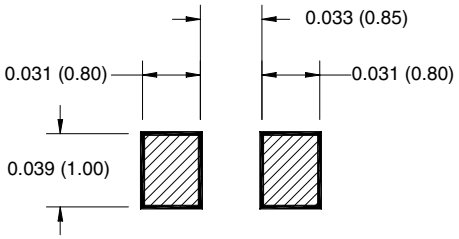
Fig.5 Maximum Forward Current vs. Ambient Temperature



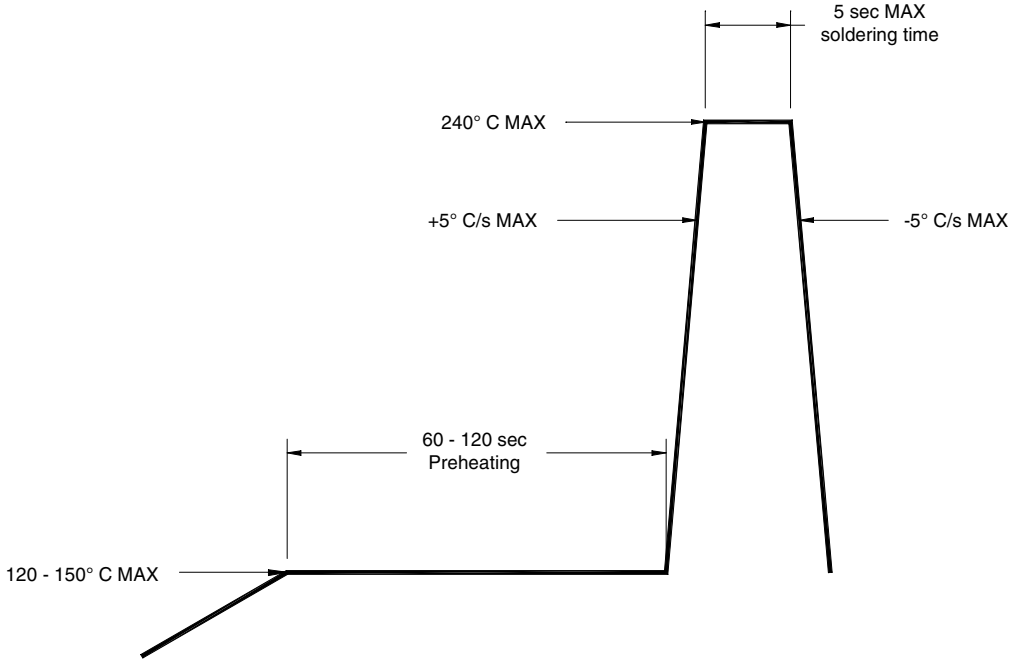
SURFACE MOUNT LED LAMP
SUPER BRIGHT 0603 (0.8 mm Height)

QTLP600C-R Red
QTLP600C-E Orange
QTLP600C-O Yellow-Orange
QTLP600C-Y Yellow
QTLP600C-AG Yellow-Green
QTLP600C-IG True Green
QTLP600C-IB Blue

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE

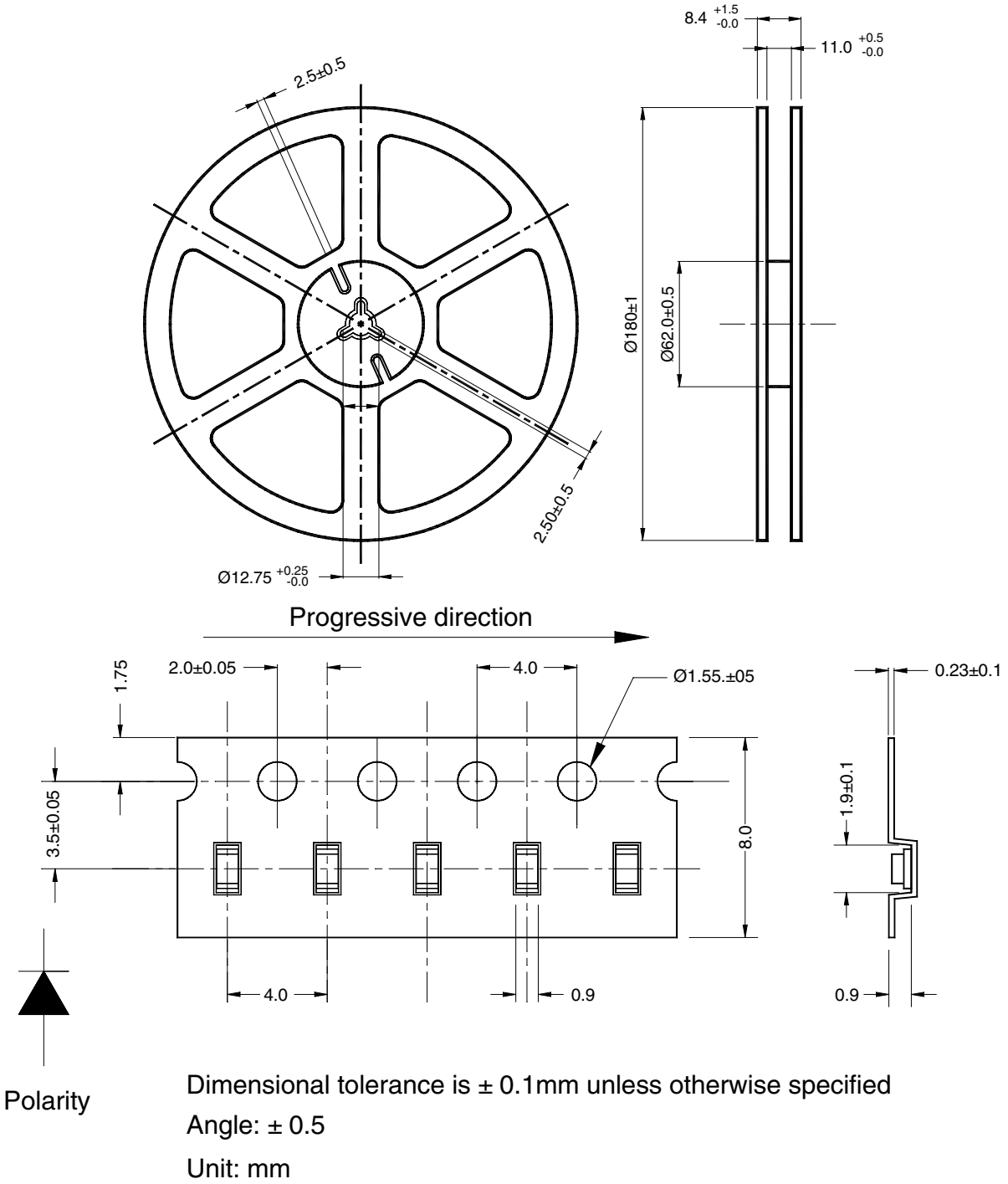


FAIRCHILD
SEMICONDUCTOR®

SURFACE MOUNT LED LAMP
SUPER BRIGHT 0603 (0.8 mm Height)

QTLP600C-R Red
QTLP600C-E Orange
QTLP600C-O Yellow-Orange
QTLP600C-Y Yellow
QTLP600C-AG Yellow-Green
QTLP600C-IG True Green
QTLP600C-IB Blue

TAPE AND REEL DIMENSIONS



Dimensional tolerance is ± 0.1mm unless otherwise specified
Angle: ± 0.5
Unit: mm

SURFACE MOUNT LED LAMP
SUPER BRIGHT 0603 (0.8 mm Height)

QTLP600C-R Red
QTLP600C-E Orange
QTLP600C-O Yellow-Orange
QTLP600C-Y Yellow
QTLP600C-AG Yellow-Green
QTLP600C-IG True Green
QTLP600C-IB Blue

DISCLAIMER
FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD 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
FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. 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 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.

QTLP600C-AG
Yellow-Green Surface Mount LED Lamp - Super Bright 0603 (0.8 mm Height)

Contents

General description | Features | Applications | Product status/pricing/packaging

Datasheet

Download this datasheet

PDF

e-mail this datasheet

[E-

This page

Print version

Related Links

Request samples

How to order products

Product Change Notices (PCNs)

Support

Distributor and field sales representatives

Quality and reliability

Design tools

General description

These surface mount chip LEDs are designed to fit the industry standard footprint. Small size, low profile and wide viewing angle make these LEDs ideal choices for backlighting applications and panel illumination.

back to top

Features

- Small footprint - 1.6(L) x 0.8(W) x 0.8(H) mm
- AlInGaP technology for -R, -E, -O, -Y and -AG
- InGaN/SiC technology for -IG and -IB
- Wide viewing angle of 100°
- Water clear optics
- Moisture-proof packaging
- Available in 0.315-inch (8 mm) width tape on 7-inch (178 mm) diameter reel; 2,000 units per reel

back to top

Applications

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

back to top

Product status/pricing/packaging

Product	Product status	Pricing*	Inventory check & ordering	Package type	Packing method
QTLP600CAGTR	Full Production	$0.071	Purchase	SMD	BOX

* Fairchild 1,000 piece Budgetary Pricing

back to top

Home | Find products | Technical information | Buy products | Support | Company | Contact us | Site index | Privacy policy

© Copyright 2002 Fairchild Semiconductor

QTLP600C-E
Red Surface Mount LED Lamp - Super Bright 0603 (0.8 mm Height)

Contents
General description | Features | Applications | Product status/pricing/packaging

Datasheet
Download this datasheet
PDF

e-mail this datasheet
[E-

This page
Print version

Related Links

Request samples
How to order products
Product Change Notices (PCNs)
Support
Distributor and field sales representatives
Quality and reliability
Design tools

General description

These surface mount chip LEDs are designed to fit the industry standard footprint. Small size, low profile and wide viewing angle make these LEDs ideal choices for backlighting applications and panel illumination.

back to top

Features

- Small footprint - 1.6(L) x 0.8(W) x 0.8(H) mm
- AlInGaP technology for -R, -E, -O, -Y and -AG
- InGaN/SiC technology for -IG and -IB
- Wide viewing angle of 100°
- Water clear optics
- Moisture-proof packaging
- Available in 0.315-inch (8 mm) width tape on 7-inch (178 mm) diameter reel; 2,000 units per reel

back to top

Applications

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

back to top

Product status/pricing/packaging

Product	Product status	Pricing*	Inventory check & ordering	Package type	Packing method
QTLP600CETR	Full Production	$0.051	Purchase	SMD	BOX

* Fairchild 1,000 piece Budgetary Pricing

back to top

Home | Find products | Technical information | Buy products |
Support | Company | Contact us | Site index | Privacy policy

© Copyright 2002 Fairchild Semiconductor

QTLP600C-IB
Surface Mount LED Lamp - Super Bright 0606

Contents

General description | Features | Applications | Product status/pricing/packaging

Datasheet

Download this datasheet

PDF

e-mail this datasheet

[E-

This page

Print version

Related Links

Request samples
How to order products
Product Change Notices (PCNs)
Support
Distributor and field sales representatives
Quality and reliability
Design tools

General description

These surface mount chip LEDs are designed to fit the industry standard footprint. Small size, low profile and wide viewing angle make these LEDs ideal choices for backlighting applications and panel illumination.

back to top

Features

- Small footprint - 1.6(L) x 0.8(W) x 0.8(H) mm
- AlInGaP technology for -R, -E, -O, -Y and -AG
- InGaN/SiC technology for -IG and -IB
- Wide viewing angle of 100°
- Water clear optics
- Moisture-proof packaging
- Available in 0.315-inch (8 mm) width tape on 7-inch (178 mm) diameter reel; 2,000 units per reel

back to top

Applications

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

back to top

Product status/pricing/packaging

Product	Product status	Pricing*	Inventory check & ordering	Package type	Packing method
QTLP600CIBTR	Full Production	$0.67	Purchase	SMD	BOX

* Fairchild 1,000 piece Budgetary Pricing

back to top

Home | Find products | Technical information | Buy products | Support | Company | Contact us | Site index | Privacy policy

© Copyright 2002 Fairchild Semiconductor

QTLP600C-IG
High Efficiency Red Rectangular Solid State Lamp

Contents
General description | Features | Applications | Product status/pricing/packaging

Datasheet
Download this datasheet
PDF

e-mail this datasheet
[E-

This page
Print version

Related Links

Request samples
How to order products
Product Change Notices (PCNs)
Support
Distributor and field sales representatives
Quality and reliability
Design tools

General description

These surface mount chip LEDs are designed to fit the industry standard footprint. Small size, low profile and wide viewing angle make these LEDs ideal choices for backlighting applications and panel illumination.

back to top

Features

- Small footprint - 1.6(L) x 0.8(W) x 0.8(H) mm
- AlInGaP technology for -R, -E, -O, -Y and -AG
- InGaN/SiC technology for -IG and -IB
- Wide viewing angle of 100°
- Water clear optics
- Moisture-proof packaging
- Available in 0.315-inch (8 mm) width tape on 7-inch (178 mm) diameter reel; 2,000 units per reel

back to top

Applications

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

back to top

Product status/pricing/packaging

Product	Product status	Pricing*	Inventory check & ordering	Package type	Packing method
QTLP600CIGTR	Full Production	$0.79	Purchase	SMD	BOX

* Fairchild 1,000 piece Budgetary Pricing

back to top

Home | Find products | Technical information | Buy products |
Support | Company | Contact us | Site index | Privacy policy

© Copyright 2002 Fairchild Semiconductor

QTLP600C-O
Yellow Surface Mount LED Lamp - Super Bright 0603 (0.8 mm Height)

Contents

General description | Features | Applications | Product status/pricing/packaging

Datasheet
Download this datasheet
PDF

e-mail this datasheet
[E-

This page
Print version

General description

These surface mount chip LEDs are designed to fit the industry standard footprint. Small size, low profile and wide viewing angle make these LEDs ideal choices for backlighting applications and panel illumination.

back to top

Features

- Small footprint - 1.6(L) x 0.8(W) x 0.8(H) mm
- AlInGaP technology for -R, -E, -O, -Y and -AG
- InGaN/SiC technology for -IG and -IB
- Wide viewing angle of 100°
- Water clear optics
- Moisture-proof packaging
- Available in 0.315-inch (8 mm) width tape on 7-inch (178 mm) diameter reel; 2,000 units per reel

back to top

Applications

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

back to top

Product status/pricing/packaging

Product	Product status	Pricing*	Inventory check & ordering	Package type	Packing method
QTLP600COTR	Full Production	$0.051	Purchase	SMD	BOX

* Fairchild 1,000 piece Budgetary Pricing

back to top

Home | Find products | Technical information | Buy products |
Support | Company | Contact us | Site index | Privacy policy

© Copyright 2002 Fairchild Semiconductor

QTLP600C-R
High Efficiency Red Surface Mount LED Lamp - Standard Bright 0603 (0.6 mm Height)

Contents
General description | Features | Applications | Product status/pricing/packaging

Datasheet
Download this datasheet
PDF

e-mail this datasheet
[E-

This page
Print version

Related Links

Request samples
How to order products
Product Change Notices (PCNs)
Support
Distributor and field sales representatives
Quality and reliability
Design tools

General description

These surface mount chip LEDs are designed to fit the industry standard footprint. Small size, low profile and wide viewing angle make these LEDs ideal choices for backlighting applications and panel illumination.

back to top

Features

- Small footprint - 1.6(L) x 0.8(W) x 0.8(H) mm
- AlInGaP technology for -R, -E, -O, -Y and -AG
- InGaN/SiC technology for -IG and -IB
- Wide viewing angle of 100°
- Water clear optics
- Moisture-proof packaging
- Available in 0.315-inch (8 mm) width tape on 7-inch (178 mm) diameter reel; 2,000 units per reel

back to top

Applications

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

back to top

Product status/pricing/packaging

Product	Product status	Pricing*	Inventory check & ordering	Package type	Packing method
QTLP600CRTR	Full Production	$0.051	Purchase	SMD	BOX

* Fairchild 1,000 piece Budgetary Pricing

back to top

Home | Find products | Technical information | Buy products |
Support | Company | Contact us | Site index | Privacy policy

© Copyright 2002 Fairchild Semiconductor

QTLP600C-Y
AlGaAs Red Surface Mount LED Lamp - Standard Bright 0603 (0.6 mm Height)

Contents
General description | Features | Applications | Product status/pricing/packaging

Datasheet
Download this datasheet
PDF

e-mail this datasheet
[E-

This page
Print version

Related Links

Request samples
How to order products
Product Change Notices (PCNs)
Support
Distributor and field sales representatives
Quality and reliability
Design tools

General description

These surface mount chip LEDs are designed to fit the industry standard footprint. Small size, low profile and wide viewing angle make these LEDs ideal choices for backlighting applications and panel illumination.

back to top

Features

- Small footprint - 1.6(L) x 0.8(W) x 0.8(H) mm
- AlInGaP technology for -R, -E, -O, -Y and -AG
- InGaN/SiC technology for -IG and -IB
- Wide viewing angle of 100°
- Water clear optics
- Moisture-proof packaging
- Available in 0.315-inch (8 mm) width tape on 7-inch (178 mm) diameter reel; 2,000 units per reel

back to top

Applications

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

back to top

Product status/pricing/packaging

Product	Product status	Pricing*	Inventory check & ordering	Package type	Packing method
QTLP600CYTR	Full Production	$0.051	Purchase	SMD	BOX

* Fairchild 1,000 piece Budgetary Pricing

back to top

Home | Find products | Technical information | Buy products | Support | Company | Contact us | Site index | Privacy policy

© Copyright 2002 Fairchild Semiconductor

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Standard LEDs - SMD ***category:***

Click to view products by Everlight ***manufacturer:***

Other Similar products are found below :

LTST-C190KYKT LTST-C19GD2WT LTST-N683GBEW LTW-170ZDC 598-8110-100F 598-8170-100F 598-8610-202F 67-22VRVGC/TR8 AAAF5060QBFSEEZGS HLMA-QG00-S0021 HLMP-6305-L0011 ALMD-LB36-SV002 APT1608QGW 15-21UYC/S530-A3/TR8 EAST2012YA0 EASV1803BA0 LG M67K-H1J2-24-0-2-R18-Z LS A676-P2S1-1 SML310BATT86 SML-LX0606SISUGC/A SML-LXL1307SRC-TR SML-LXR851SIUPGUBC LT1ED53A FAT801-S AM27ZGC03 APB3025SGNC APFA3010SURKCGKQBDC APHK1608VGCA APT2012QGW LTST-C250KGKT LTW-010DCG LTW-020ZDCG LTW-21TS5 LTW-220DS5 LY L29K-H1J2-26 UYGT801-S 42-21UYC/S530-A3/TR8 LO T67F-V1AB-24-1 YGFR411-H 598-8330-117F SML-LX0402IC-TR CMDA20AYAA7D1S CMDA16AYDR7A1X 598-8040-100F 598-8070-100F 598-8140-100F 598-8610-200F EAST2012GA0 EAPL3527GA5 EASV3020YGA0