

QTLP660C-R Red

QTLP660C-E Orange

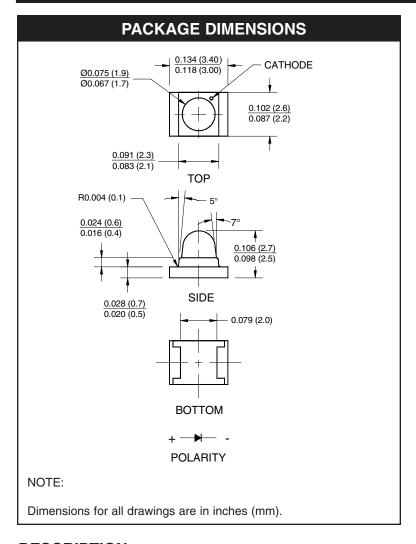
QTLP660C-O Yellow-Orange

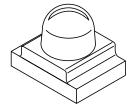
QTLP660C-Y Yellow

QTLP660C-AG Yellow-Green

QTLP660C-IG True Green

QTLP660C-IB Blue





APPLICATIONS

- · Backlighting
- Status indication for consumer electronics and other equipment

DESCRIPTION

These super bright surface mount chip LEDs are designed with a 1.8 mm dome lens that focuses the light output.

FEATURES

- Small footprint 3.2(L) X 2.4(W) X 2.6(H) mm
- AllnGaP technology for -R, -E, -O, -Y and -AG
- InGaN/SiC technology for -IG and -IB
- Narrow viewing angle of 30°
- · Water clear optics
- Moisture-proof packaging
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel; 2,000 units per reel



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ABSOLUTE MAXIMUM RATINGS (TA =25°C Unless otherwise specified)							
			QTLP660C				
Parameter	Symbol	-R	-E	-0	-Y	-AG	Units
Continuous Forward Current	I _F	30	30	30	25	30	mA
Peak Forward Current		160	160	160	120	160	mA
(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				°C	
Storage Temperature	T _{STG}	-40 to +90 °C			°C		
Lead Soldering Time	T _{SOL}			260 for 5 sec			°C

ABSOLUTE MAXIMUM RATINGS (TA =25°C Unless otherwise specified)					
		QTL	QTLP660C		
Parameter	Symbol	-IB	-IG	Units	
Continuous Forward Current	IF	30	30	mA	
Peak Forward Current	I _{FM}	100	100		
(f = 1.0 KHz, Duty Factor = 1/10)		100	100	mA	
Reverse Voltage	V _R	5	5	V	
Power Dissipation	P _D	120	120	mW	
Operating Temperature	T _{OPR}	-40	°C		
Storage Temperature	T _{STG}	-40	°C		
Lead Soldering Time	T _{SOL}	260 f	or 5 sec	°C	



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ELECTRICAL / OPTICAL CHARACTERISTICS (TA =25°C)							
Part Number		QTLP660C					
	Symbol	-R	-E	-0	-Y	-AG	Condition
Luminous Intensity (mcd)							
Minimum	I _V	150	150	150	150	110	$I_F = 20mA$
Typical		400	400	400	400	160	
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)	Δλ	20	18	18	15	20	$I_F = 20mA$
Viewing Angle (°)	201/2	30	30	30	30	30	$I_F = 20mA$

ELECTRICAL / OPTICAL CHARACTERISTICS (TA =25°C)					
B. I.N. of a		QTLI	0 1111		
Part Number	Symbol	-IB	-IG	Condition	
Luminous Intensity (mcd)					
Minimum	I _V	110	500	$I_F = 20mA$	
Typical		150	900		
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)	Δλ	25	35	$I_F = 20mA$	
Viewing Angle (°)	201/ ₂	30	30	$I_F = 20 \text{mA}$	



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TYPICAL PERFORMANCE CURVES (QTLP660C-R, -E, -O, -Y and -AG)

Fig. 1 Forward Current vs. Forward Voltage

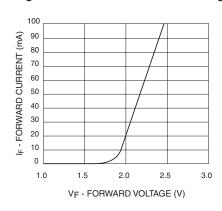


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

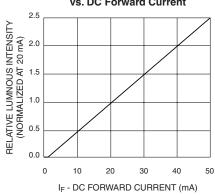


Fig. 3 Relative Intensity vs. Peak Wavelength

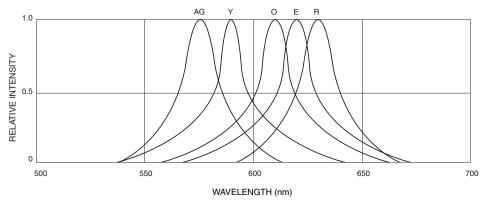


Fig.4 Radiation Diagram

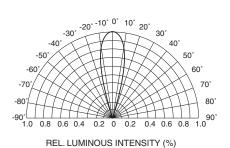
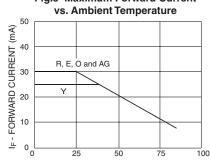


Fig.5 Maximum Forward Current



AMBIENT TEMPERATURE TA (°C)



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QTLP660C-E Orange

QTLP660C-O Yellow-Orange

QTLP660C-Y Yellow

QTLP660C-AG Yellow-Green

QTLP660C-IG True Green

QTLP660C-IB Blue

TYPICAL PERFORMANCE CURVES (QTLP660C-IG and IB)

Fig. 1 Forward Current vs. Forward Voltage

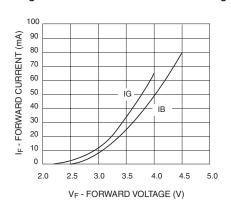


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

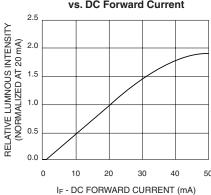


Fig. 3 Relative Intensity vs. Peak Wavelength

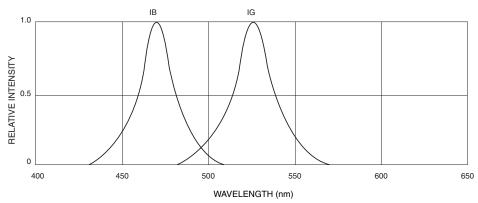


Fig.4 Radiation Diagram

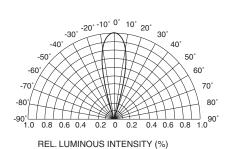
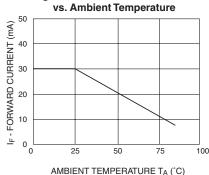


Fig.5 Maximum Forward Current





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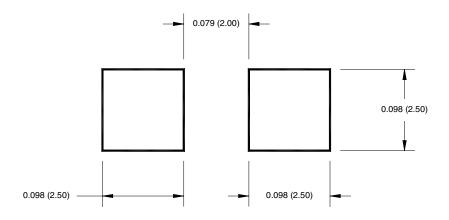
QTLP660C-Y Yellow

QTLP660C-AG Yellow-Green

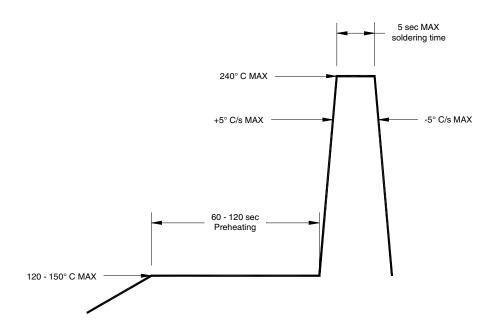
QTLP660C-IG True Green

QTLP660C-IB Blue

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE





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QTLP660C-O Yellow-Orange

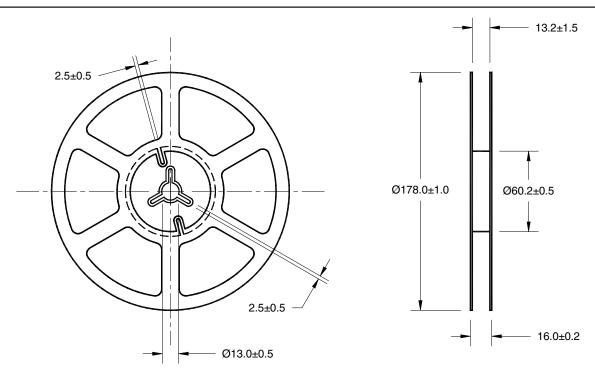
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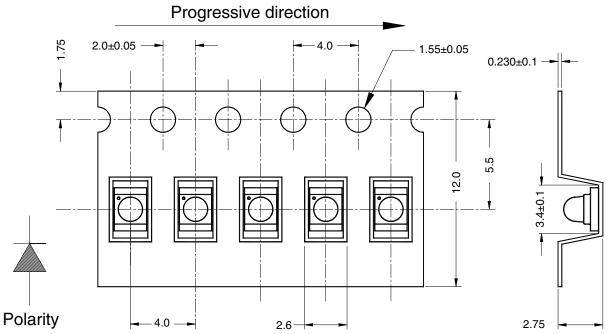
QTLP660C-AG Yellow-Green

QTLP660C-IG True Green

QTLP660C-IB Blue

TAPE AND REEL DIMENSIONS







QTLP660C-R Red

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QTLP660C-IB Blue

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Product status/pricing/packaging

• Status indication for consumer electronics and other equipment

Product	Product status	Pricing*	Package type	Packing method
QTLP660COTR	Full Production	\$0.10	SMD	TAPE REEL

^{* 1,000} piece Budgetary Pricing

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Product Folder - Fairchild P/N QTLP660C-R - Red Surface Mount LED Lamp Super Bright 1.8 mm (Dome Lens)

Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Packing method
QTLP660CRTR	Full Production	\$0.10	SMD	TAPE REEL

^{* 1,000} piece Budgetary Pricing

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Product status/pricing/packaging

• Status indication for consumer electronics and other equipment

Backlighting

Product	Product status	Pricing*	Package type	Packing method
QTLP660CYTR	Full Production	\$0.10	SMD	TAPE REEL

^{* 1,000} piece Budgetary Pricing

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Product status/pricing/packaging

electronics and other equipment

Product	Product status	Pricing*	Package type	Packing method
QTLP660CIGTR	Full Production	\$0.79	SMD	TAPE REEL

^{* 1,000} piece Budgetary Pricing

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- Backlighting
- Status indication for consumer electronics and other equipment

Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Packing method
QTLP660CIBTR	Full Production	\$0.67	SMD	TAPE REEL

^{* 1,000} piece Budgetary Pricing

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Packing method
QTLP660CETR	Full Production	\$0.10	SMD	TAPE REEL

^{* 1,000} piece Budgetary Pricing

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Applications

- Backlighting
- Status indication for consumer electronics and other equipment

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Packing method
QTLP660CAGTR	Full Production	\$0.114	SMD	TAPE REEL

^{* 1,000} piece Budgetary Pricing

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