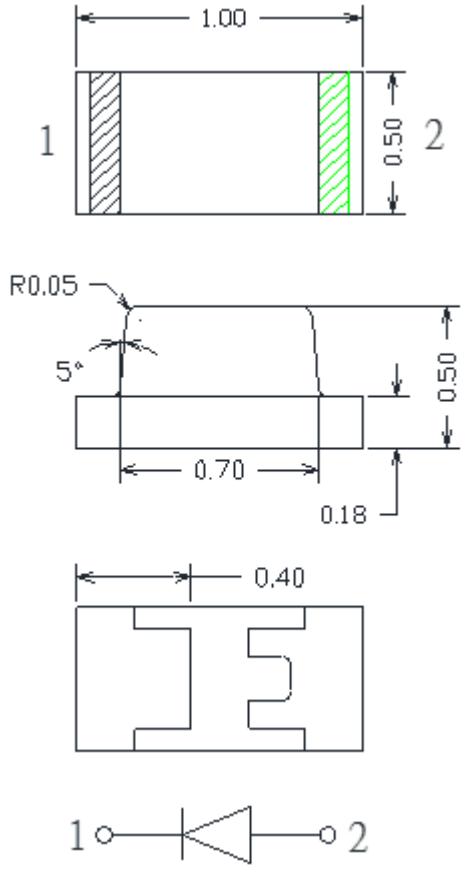
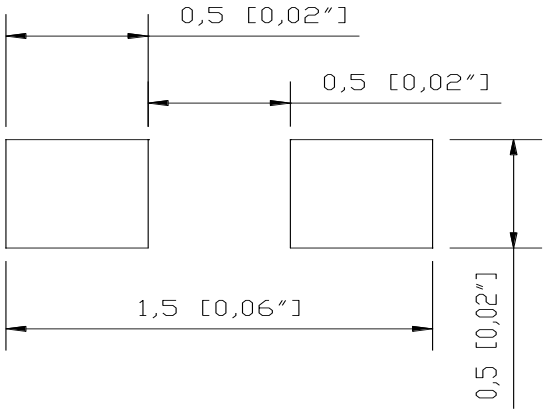
SPECIFICATION CS42C-QL4

PACKAGE OUTLINES



RECOMMEND PAD LAYOUT



Item	Material
Resin(Mold)	Epoxy
Lens Color	Water Transparent
Dice	AlGaInP/GaAs
Emitted Color	Yellow

Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25mm (0.01") unless otherwised noted.
3. Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CS42C-QL4	InGaAlP	Yellow	Water Clear	140°

ABSOLUTE MAXIMUM RATINGS (TA=25°C)

Parameter	Symbol	Max Rating	Unit
Forward Current	I_F	30	mA
Reverse Current @ 5V	I_R	10	μA
Power Dissipation	Pd	75	mW
Operating Temperature Range	T_{OP}	-40~+80	°C
Storage Temperature Range	T_{STG}	-40~+85	°C
Peak Pulsing Current (1/10 duty f = 10KHz)	I_{FP}	125	mA
Soldering Temperature	T_{SOL}	Max 260°C for 5 sec Max	

OPTICAL-ELECTRICAL CHARACTERISTICS (TA=25°C)

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	Iv	I_F = 20mA	40	115	-	mcd
Forward Voltage	V_F	I_F = 20mA	-	2.0	2.5	V
Reverse Leakage Current	I_R	V_R = 5V	-	10	-	μA
Viewing Angle at 50% Iv	2θ1/2	I_F = 20mA	-	140	-	Deg
Peak Wavelength	λ_P	I_F = 20mA	-	590	-	nm
Dominant Wavelength	λ_D	I_F = 20mA	585	590	595	nm

*Tolerance of viewing angle: -10 / +5 deg.

RoHS Compliant Lead Free

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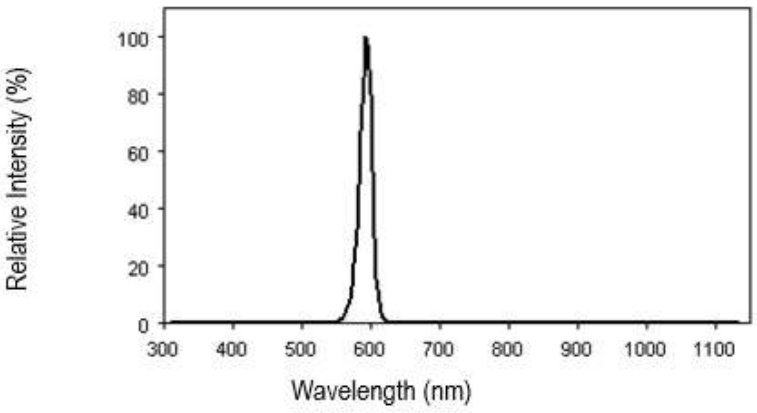
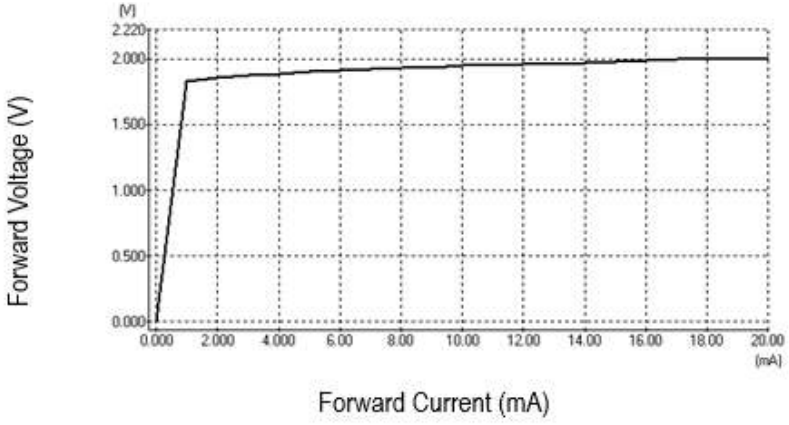
OPTICAL CHARACTERISTIC CURVES

OPTICAL CHARACTERISTIC CURVES

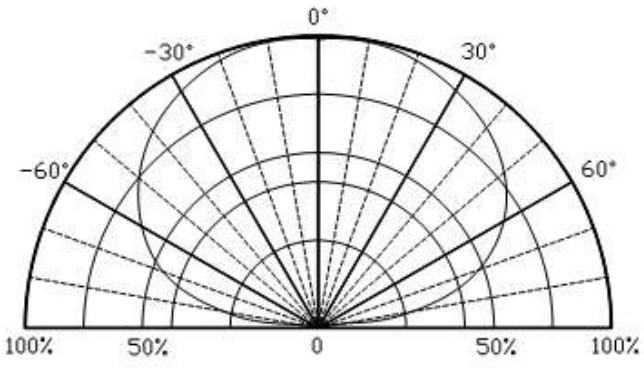
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage

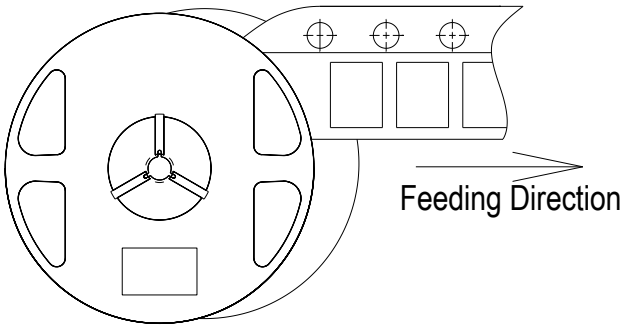


Directive Characteristics

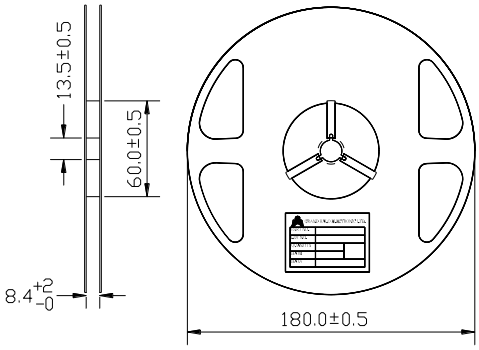


PACKAGING SPECIFICATION

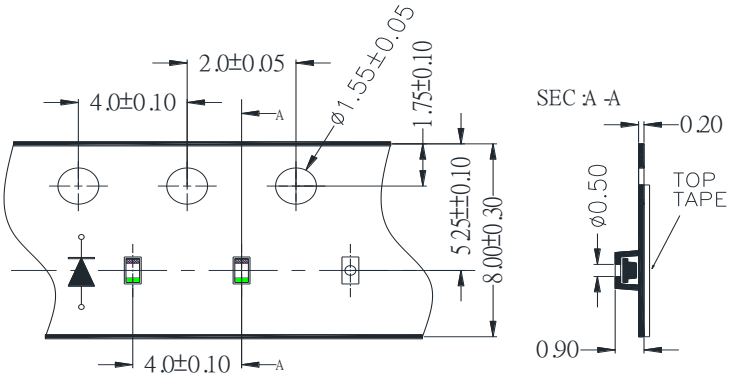
- **Feeding Direction**



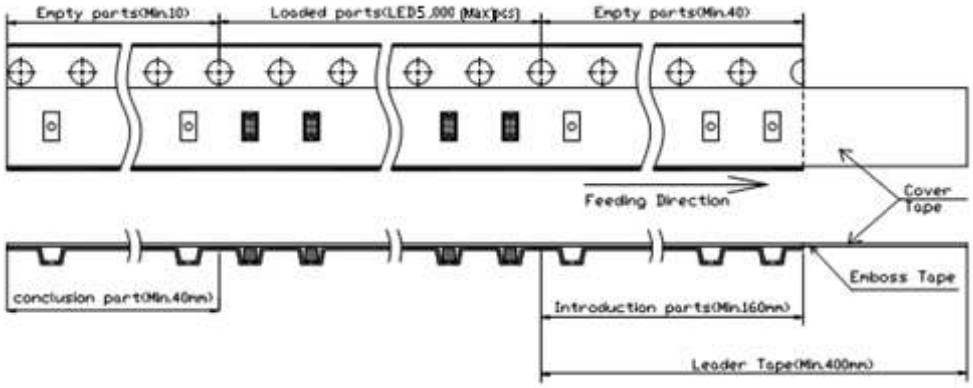
- **Dimensions of Reel (Unit: mm)**



- **Dimensions of Tape (Unit: mm)**



- **Arrangement of Tape**



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SOLDERING CONDITIONS

SOLDERING CONDITION

- When soldering for lamp without stopper type, a minimum of 3mm clearance from the base of the lens to the soldering point must be observed.
- To avoid the epoxy climb to the lead frame and impact to non-soldering problem, dipping the lens into the solder must be avoided.
- Do not apply any external stress to the lead frame during soldering while the LED is at high temperature.
- Recommended soldering condition

Soldering Iron		Wave Soldering	
Temperature Soldering Time	300℃ Max. 3 sec. Max. (one time only)	Pre-heat Pre-heat Time Solder Wave Soldering Time	100℃ Max. 60 sec. Max. 260℃ Max. 5 sec. Max.

- Excessive soldering temperature and/or time might result in deformation of the LED lens or catastrophic failure of the LED.
- Soldering Iron: each terminal is to go to the tip of the soldering iron temperature less than 260 ºC for 5 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals and solder each terminal. Be careful because the damage of the product is often started at the time of the hand solder.
- Repairing: repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used. It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.