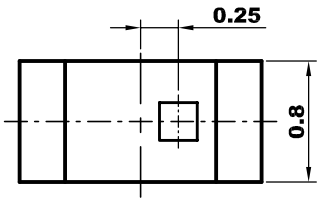
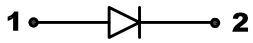
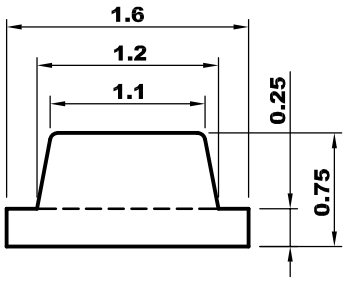
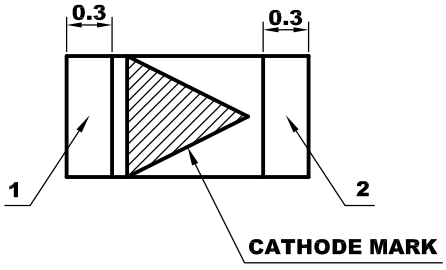
UNIT:MM
TOLERANCE:±0.15





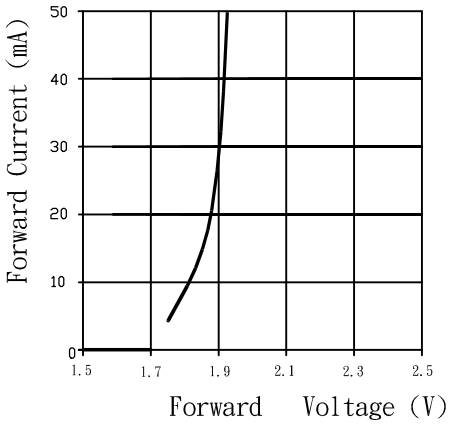




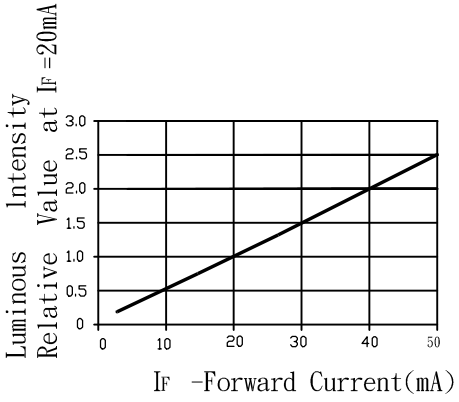
Part No.	Emitting Color	Material	Lens Type	IV (I_F = 20mA)		Viewing Angle
				MIN (mcd)	TYP (mcd)	2 θ 1/2
0603-FLWC-UDR	Super Brightness Red	AlGaInP	Water Clear	35	60	120°

Absolute maximum ratings (TA=25°C)		Red (AlGaInP)	Unit
Reverse voltage	V_R	5	V
Forward current	I_F	30	mA
Forward current(Peak) 1/10 Duty Cycle,0.1ms Pulse Width	I_{FP}	150	mA
Power dissipation	P_d	72	mW
LED LAMPS:			
Operating temperature	T_{OP}	-40~+85	°C
Storage temperature	T_{ST}	-40~+85	°C
LED DISPLAYS:			
Operating temperature	T_A	-40~+85	°C
Storage temperature	T_{STG}	-40~+85	°C

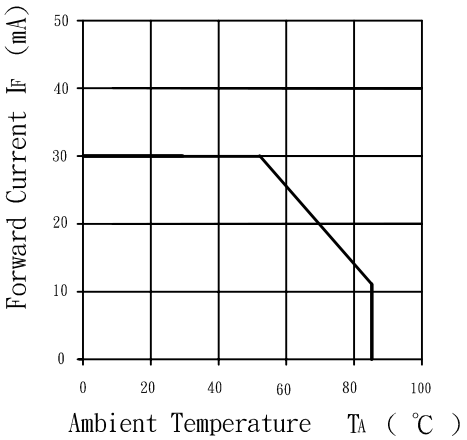
Operating characteristics (TA=25°C)		Red (AlGaInP)	Unit
Forward voltage(typ.) I_F =20mA	V_F	1.95	V
Forward voltage(max.) I_F =20mA	V_F	2.4	V
Reverse current(max.) V_R =5V	I_R	10	uA
Wavelength at dominant emission(typ.) I_F =20mA	λ_D	630	nm
Wavelength at peak emission(typ.) I_F =20mA	λ_P	650	nm
Spectral line half-width I_F =20mA	$\Delta\lambda$	22	nm
Capacitance V_F =0V ,f =1MHz	C	25	pF



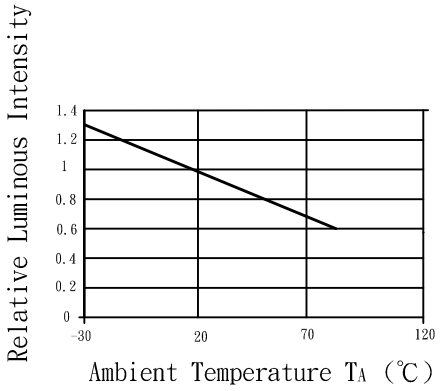
Forward Current Vs.
Forward Voltage



Luminous Intensity Vs.
Forward Current

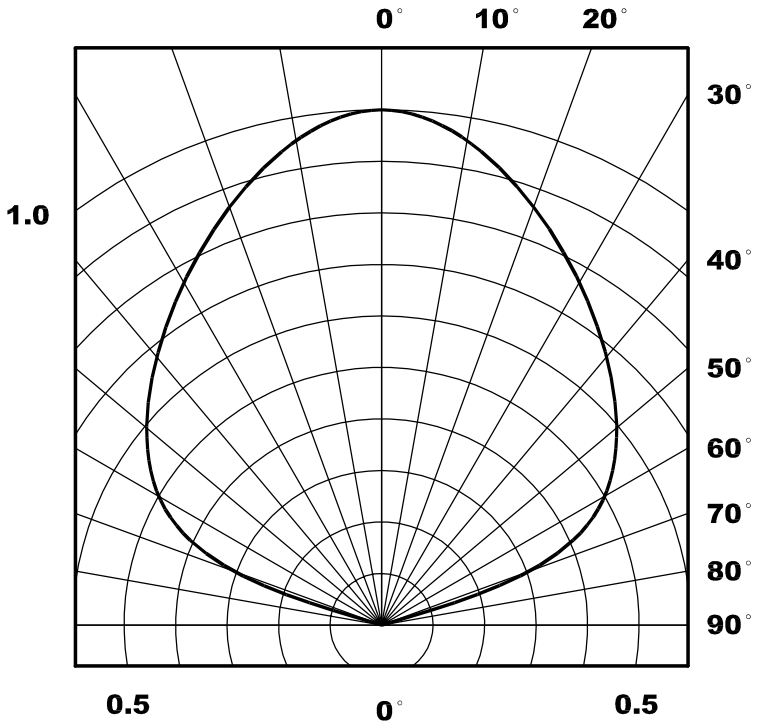


Forward Current
Derating Curve



Luminous Intensity Vs.
Ambient Temperature

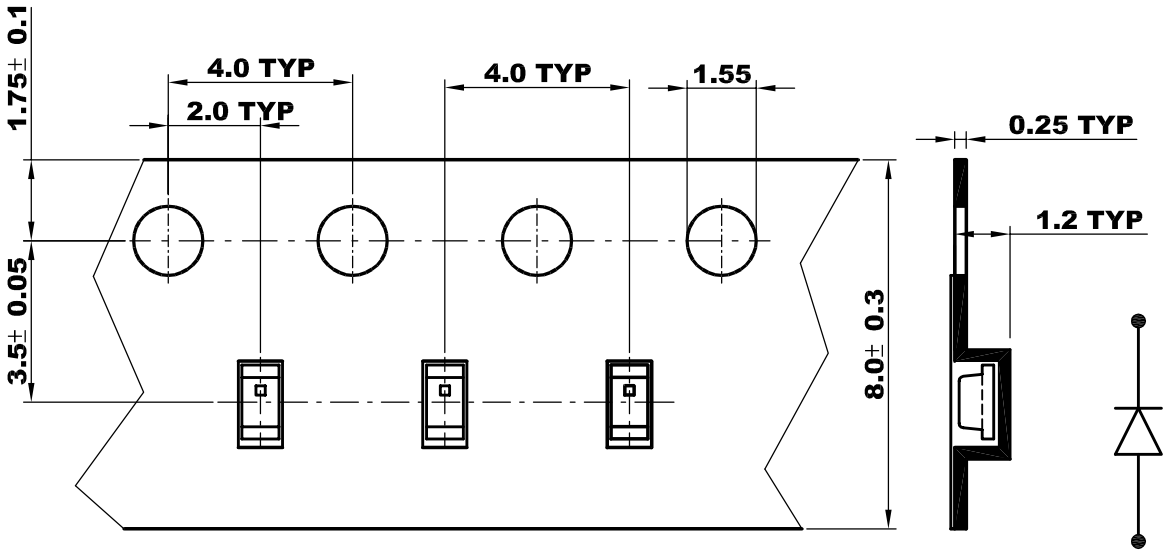
120°



View Angle 2θ1/2=120°

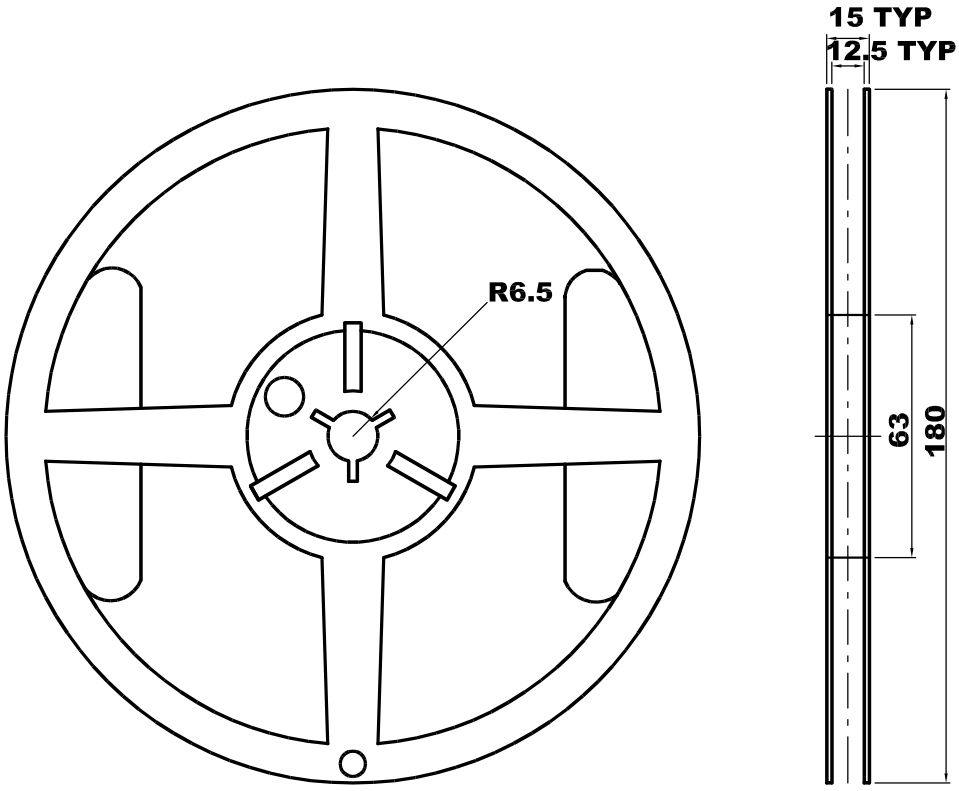
UNIT:MM
TOLERANCE:± 0.25

TYPE ⟶ PACKAGE:2000 OR 1000PCS/REEL
REEL"T":14mmTYP



REEL SPECIFICATIONS

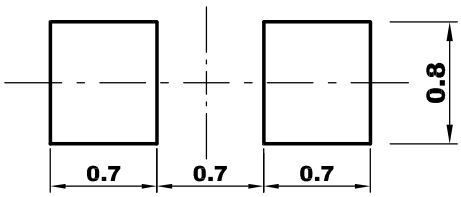
UNIT:MM
TOLERANCE:± 0.25



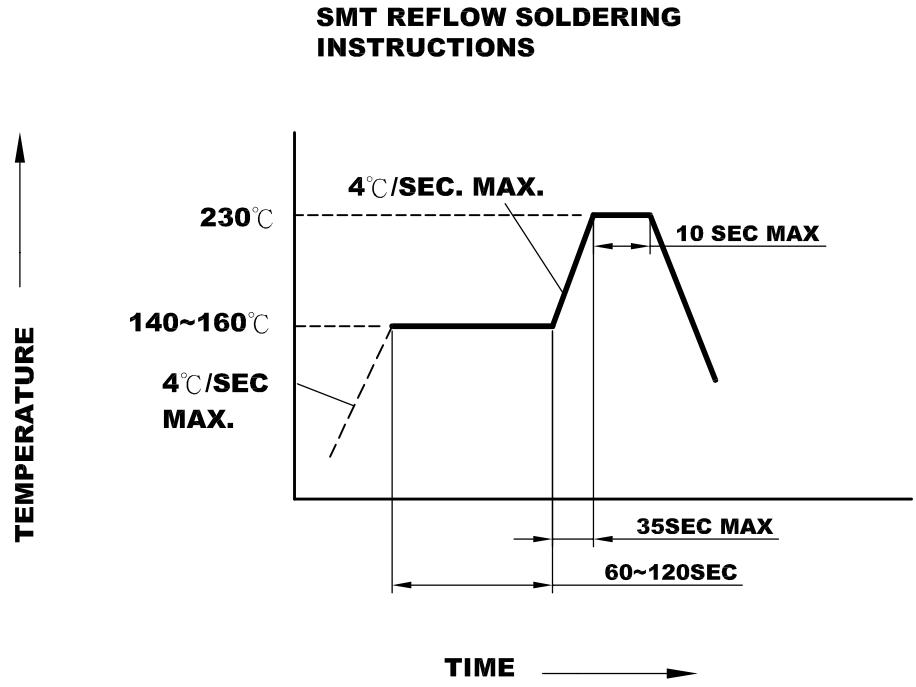
UNIT:MM

The following soldering patterns are recommended for reflow-soldering:

For reflow soldering



SMT REFLOW
SOLDERING INSTRUCTIONS



SMD HANDLING AND APPLICATION PRECAUTIONS

STORAGE

(1.1) It is recommended to store the devices in accordance with the following conditions:

Humidity: 60%RH Max.

Temperature: 5℃～30℃ (41℉～86℉)

(1.2) Shelf life in sealed bag: 12 month at <5℃～30℃ and <30%RH.
After the package is opened, the products should be used within 72hrs.
Or they should be kept at ≦20%RH in zip-locked sealed bags.

DRY PACK AND BAKING

SMD LEDs are MOISTURE SENSITIVE devices. Avoid absorbing moisture at any time during transportation and/or sotrage. It is recommended to bake before soldering when the pack is unsealed after 72 hrs, or any suspicious moisture being found. Bake devices in accordance with the following conditions:

(a) 60±3℃ x (12～24hrs) and <5%RH, taped reel type
(b) 100±3℃ x (45min～1hr), loose packing type, or
(c) 130±3℃ x (15～30min), loose packing type

ELECTRIC STATIC DISCHARGE(ESD) PROTECTION

Materials with GaN, InGaN, AlInGaP are STATIC SENSITIVE devices. They will be packed in anti-static bags. ESD protection must be deliberatively observed from the initial design stage. The static-electric discharge may result in severe malfunction of the devices. In the events of manual working in process, make sure the devices are well protected from ESD at any time. Surge before and during handling products.