Product Specification

	Specification	Material	Quantity
Iv	Red: Rank R ~100-220 mcd Green: Rank R ~100-180 mcd Rank S ~180-285 mcd Blue: Rank Q ~ 50-112 mcd @20mA/ Ta= 25° C		
lambda(λ_D)	Red: 615-635 nm Green: 515-545 nm Blue: 460-480 nm @20mA/ Ta=25° C		
Vf	Red: 1.8-2.3V Green: 2.7-3.7V Blue: 2.7-3.7V @20mA/ Ta=25° C Tolerance±0.05V		
Ir	HT standard		
Resin	Milky Diffused	Epoxy resin	
Carrier tape	According to EIA 481-1A specs	Conductive Black tape	500 pcs per reel
Reel	According to EIA 481-1A specs	Conductive Black	
Label	HT standard	Paper	
Packing bag	220x240mm	Aluminum laminated bag/ no-zipper	One reel one bag
Carton	HT standard	Paper	Non-specified

Others:

ATTENTION: Electricstatic Discharge (ESD) protection

The symbol shown on the page herein to introduce 'Electro-Optical Characteristics'. ESD protection for GaP and AlGaAs based chips is still necessary even though they are safe in low static-electric discharge. Parts built with AlInGaP, GaN, or/and InGaN based chips are **STATIC SENSITIVE devices**. ESD protection has to considered and taken in the initial design stage. If manual work/process is needed, please ensure the device is well protected from ESD during all the process.

Product Feature

■ Electro-Optical Characteristics

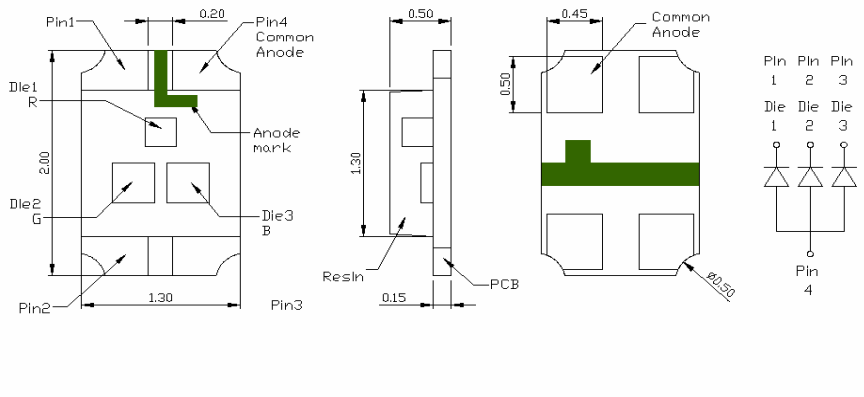
(I_F @ 20mA, T_a 25°C)

Code for parts	Lighting Color			V_F(V)		λ (nm)			I^*_V(mcd)	
				typ	max	λ_D	λ_P	△λ	Min	Typ.
HT-374FCH	Die1	Ultra Bright Orange	USD	2.0	2.3	615	621	18	100	120
	Die2	Green	NG	3.3	3.7	530	525	35	100	160
	Die3	Blue	NB	3.3	3.7	470	468	26	50	80

■ Package Outline Dimension and Recommended Soldering Pattern for Re-flow Soldering

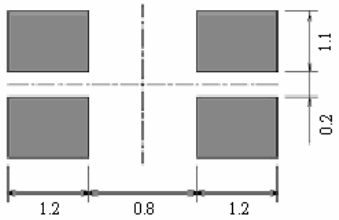
Tolerance: +/-0.05

Outline Dim.



Die 1 Red Die 2 Green Die 3 Blue

Soldering Pattern



Unit: mm

1. Soldering terminal may shift in x, y direction.
2. Common anode.

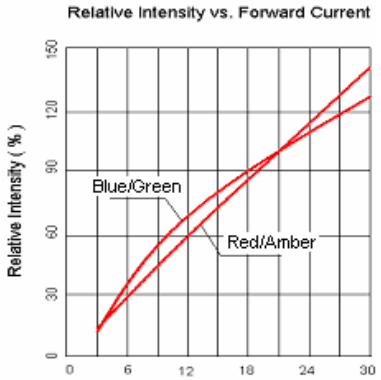
■ Absolute Maximum Ratings

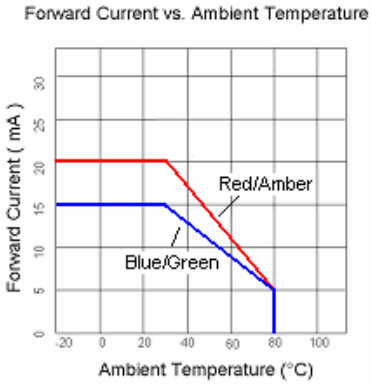
(T_a 25°C)

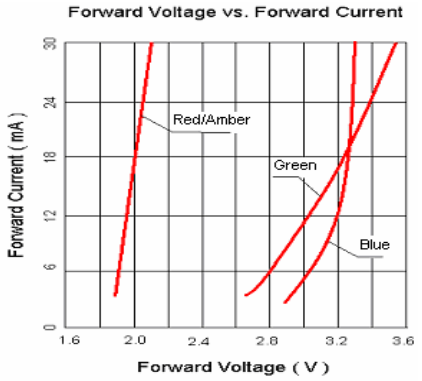
Series	P_d (mW)	I_F (mA)	I_{FP} (mA)	V_R (V)	I_R (uA)	T_{OP} (°C)	T_{ST} (°C)
Red	48	20	80**	5	<100@ V_R = 5	-30~+80	-40~+85
Blue / Green	74	20	100**				

** Condition for I_{FP} is pulse of 1/10 duty and 0.1msec width

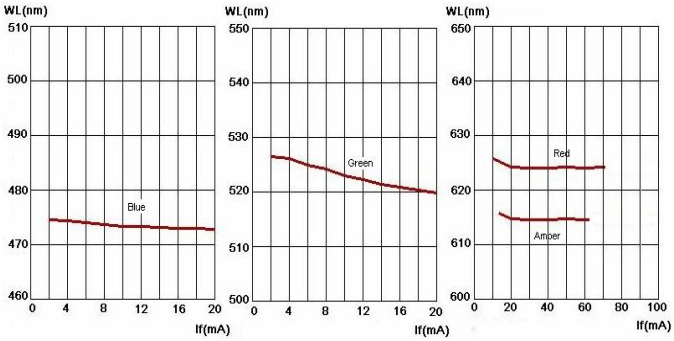
Characteristics of HT-374FCH Series



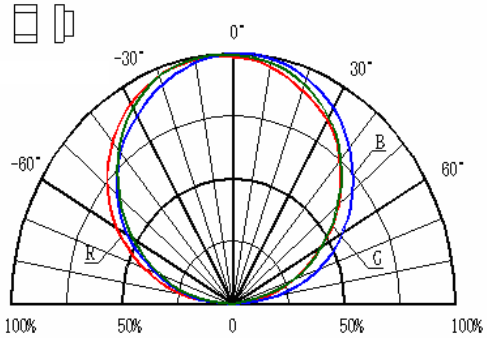




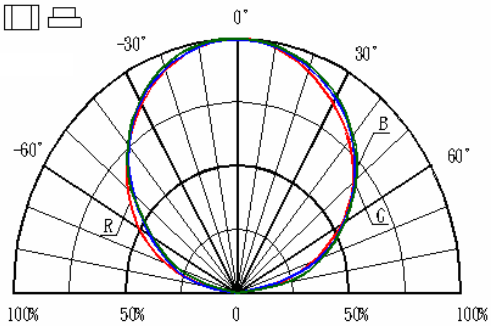
Wavelength vs. Froward Current



Directive Characteristics



Directive Characteristics

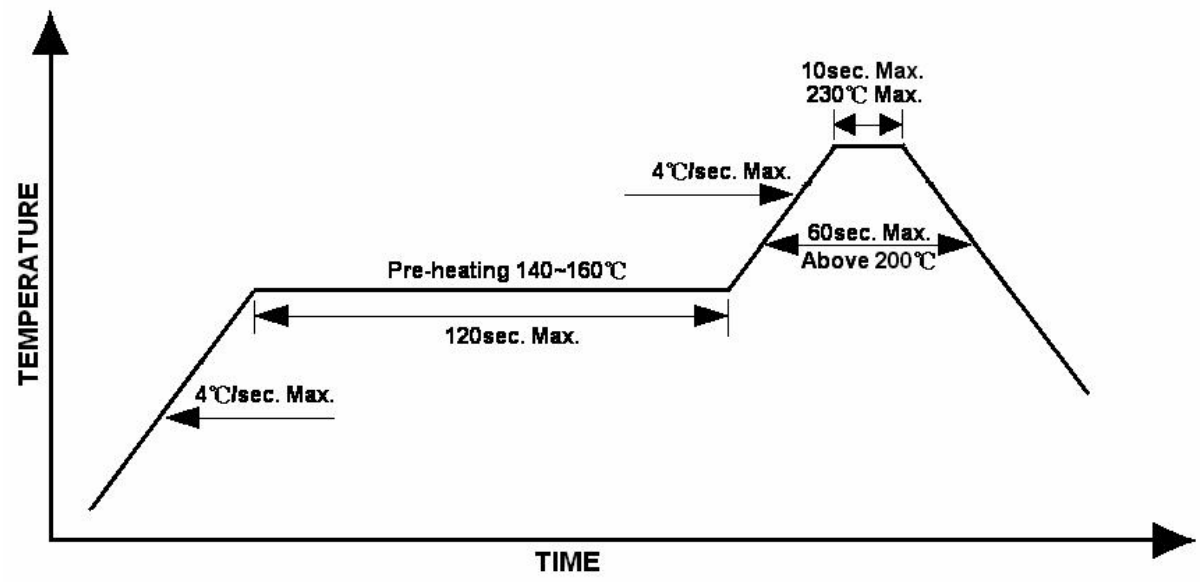


- Do not use again it you remove the soldered product.
- It is recommended using an iron with a temperature control.

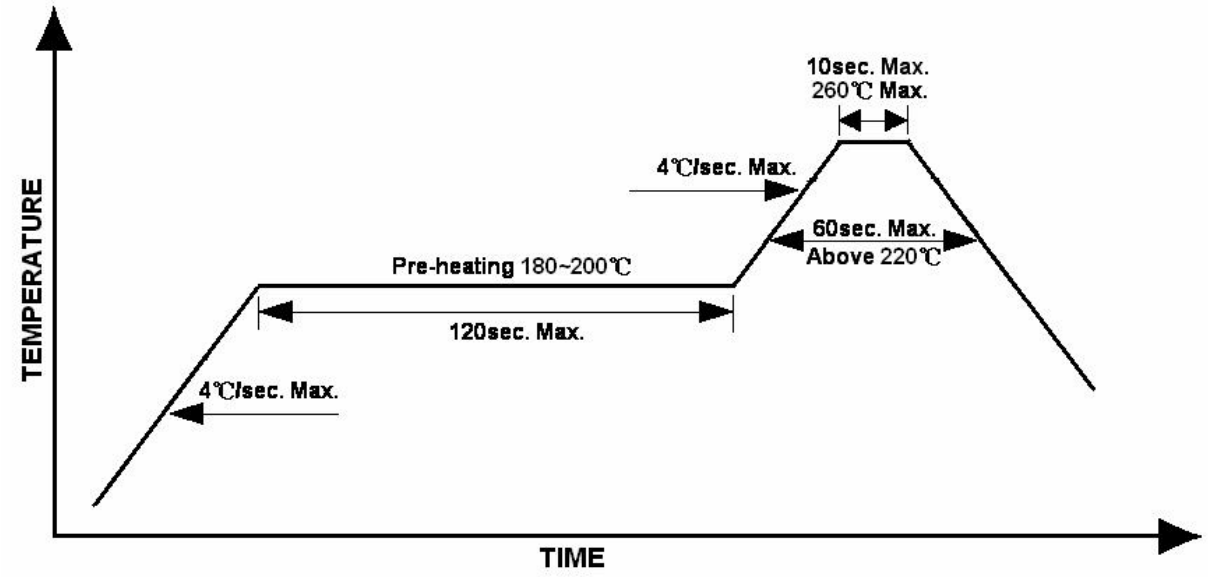
Re-flow Soldering

- Recommend tin glue specifications:
  Melting temperature: 178~192 ^{O}C
- Never take next process until the component is cooled down to room temperature after re-flow.
- The recommended reflow soldering profile (measuring on the surface of the LED resin) is following:

Lead Solder profile



Lead-free Solder profile



Rework

- Customer must finish rework within 5 sec. under 260 ^{O}C.
- The head of iron cannot touch copper foil.
- Twin-head type is preferred.

Cleaning

- The conditions of cleaning after soldering:
- An alcohol-based solvent such as Isopropyl Alcohol (IPA) is recommended.
- Temperature×Time: <50 ^{O}C×30sec, or <30 ^{O}C×3min
- Ultra sonic cleaning: < 15W/ bath; Bath volume: 1liter max.
- Curing: 100 ^{O}C max, <3min

Cautions of Pick and Place

- It should be avoided to load stress on the resin during high temperature.
- Avoid rubbing or scraping the resin by any object.
- Electric-static may cause damage to the component. Please confirm that the equipment is grounding well. Using an ionizer fan is recommended.