DEMASLED

SPECIFICATION FOR APPROVAL

Customer:

Technical Data Sheet

PN: HP5

For: IF= 700mA

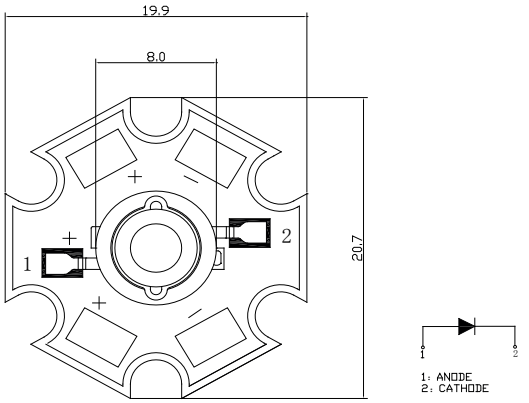
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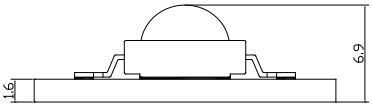
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Customer confirm	Approved by	Checked by	Issued by

■ **Mechanical Dimensions**:

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Note:

1. All dimensions are in millimeters.
2. All dimensions without tolerances are for reference only.
3. Material as follows:

Package:	Heat-Resistant Polymer
Electrodes:	Cu Plating Copper Alloy

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■Absolute Maximum Ratings (Ta = 25℃) :

Items	Symbol	Absolute maximum Rating		Unit
		Blue/Green/White	Red/Yellow	
Power Dissipation *	P_D	5000	5000	mW
DC Forward Current	I_F	700	700	mA
Peak Pulse Forward Current*	I_{FP}	900	900	mA
Average Forward Current	I_{avg}	400	400	mA
Reverse Voltage	V_R	5	5	V
LED Junction Temperature	T_j	125	125	℃
Operating Temperature	T_{op}	-30 ~ +80	-30~+80	℃
Storage Temperature	T_{stg}	-40 ~ +100	-40 ~ +100	℃
Soldering Temperature	T_{sol}	Max.180°C for 10 sec Max (4mm from the base of the lens)		

*Pulse width≦0.1msec duty≦1/10

■ Typical Electrical & Optical Characteristics (Ta = 25℃):

Part No	Color Temperature	Forward Voltage(V)			Test Condition	Viewing Angle (Typ.)	Luminous Flux （lm）
		Min.	Typ.	Max.			
HP5	5500-6500K	6.0	6.5	7.0	I_F = 700mA	140	220-240

■Notes:

1.Absolute maximum ratings Ta=25℃

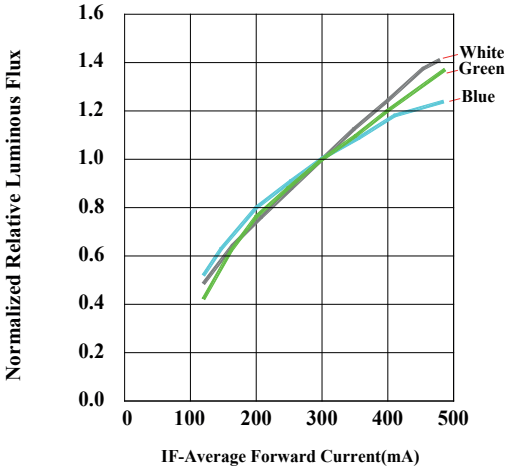
2.Tolerance of measurement of forward voltage±0.1V.

3.Tolerance of measurement of Luminous Flux ±15%.

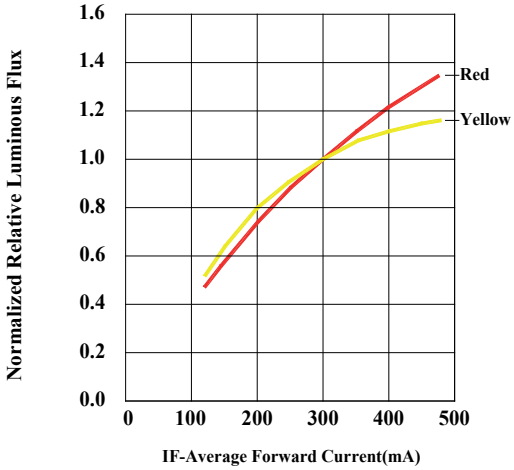
■ Typical Electrical/ Optical Characteristics Curves

(Ta=25°C Unless Otherwise Noted) :

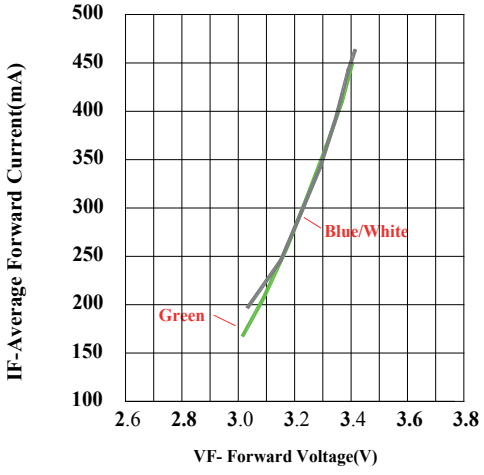
Forward Current Characteristics



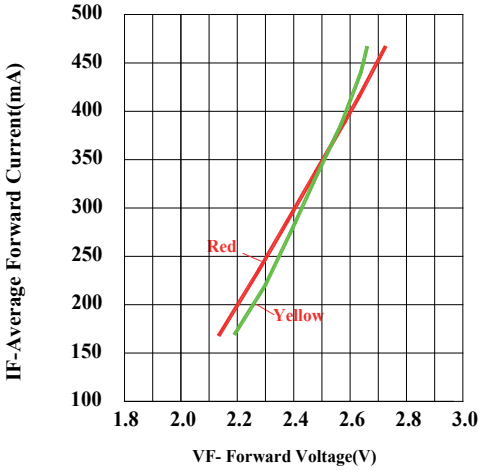
Relative Luminous Flux vs. Forward Current for White/Green/Blue



Relative Luminous Flux vs. Forward Current for Red/Yellow

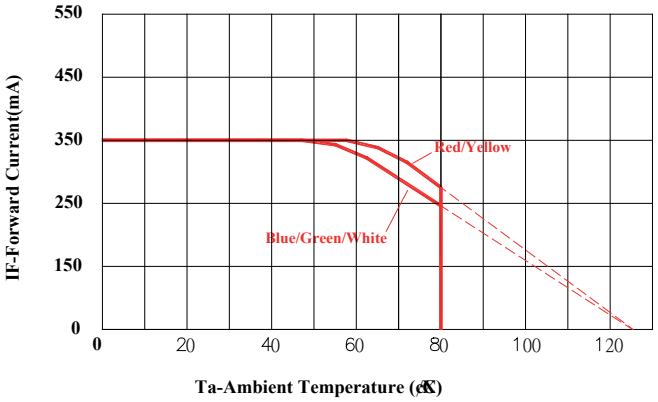


Forward Current vs. Forward Voltage for White/Green/Blue



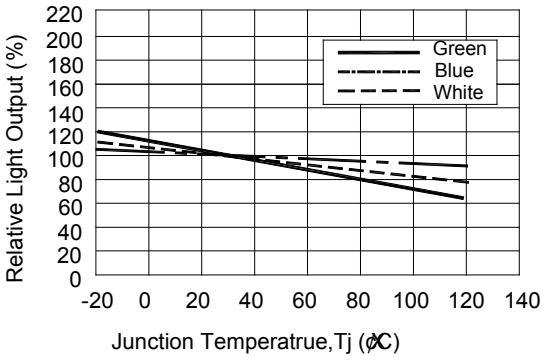
Forward Current vs. Forward Voltage for Red/Yellow

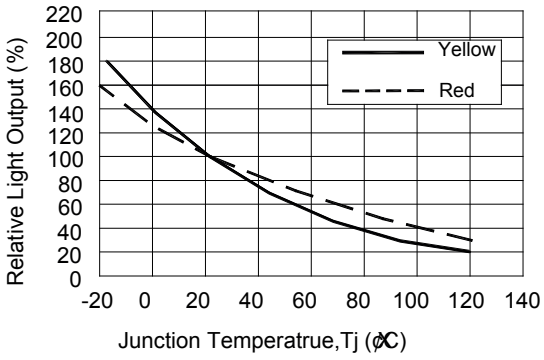
Current Derating Curves



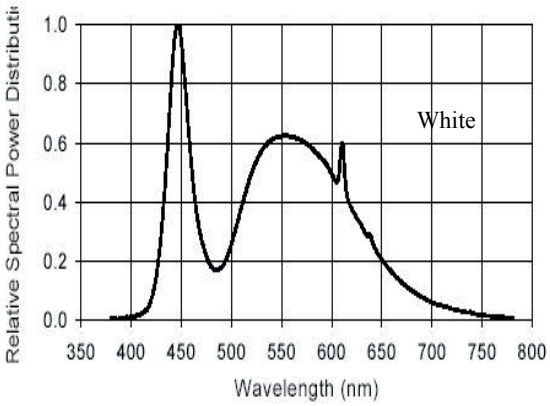
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Light Output Characteristics

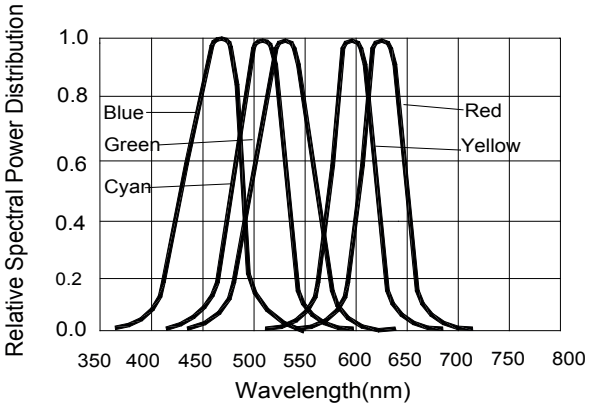




Wavelength Characteristics

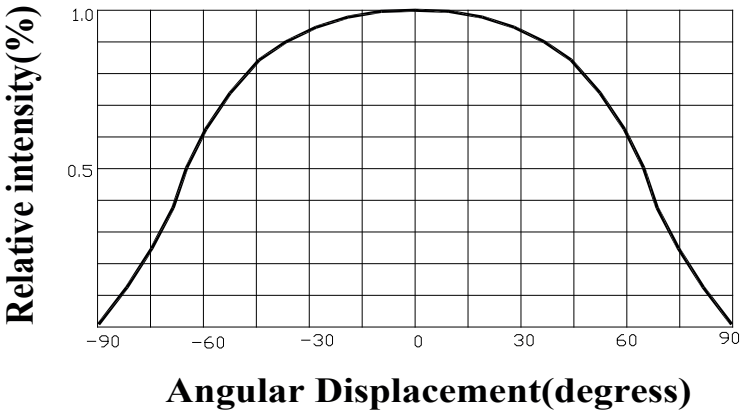


Relative Intensity vs Wavelength (nm)



Relative Intensity vs. Wavelength(nm)

Typical Representative Spatial Radiation Pattern of single LED



■ Reliability

1.Test Items And Results

Classi-fication	Test Item	Reference Standard	Test Conditions	Duration	Units Tested	Number of Damaged
Operation Test	Operating Life Test		T_A=25℃±5℃，IF=700mA	1000 Hrs	22	0/22
Environmen Test	High Temperature Storage	JEITA ED-4701 200 201	T_A=100℃±5℃	1000 Hrs	22	0/22
	Low Temperature Storage	JEITA ED-4701 200 201	T_A= - 40℃±5℃	1000 Hrs	22	0/22
	Temperature. & Humidity Storage		T_A=85℃±5℃，RH=85%±5%RH	1000 Hrs	22	0/22
	Thermal Shock	JEITA ED-4701 300 307	-40°±5℃ ←→+85℃±5℃ 30min dwell / 5 min transfer	50 Cycles	22	0/22
Soldering Test	Solder ability		160±5℃，30 ±1 sec	1 time Over 95%Wetting	22	0/22
	Resistance to Soldering Heat		180±5℃，10 ±1 sec	1 time	22	0/22

2.Failure criteria

- Electrical Failures:
  - V_F shift% >10%
  - IR(VR=5V)>100uA
- Light Output Degradation:
  - Flux Degradation% > 50% max ;> 35% average
- Visual Failures:
  - Broken or damaged package or lead
  - Solder ability < 95% Wetting
  - Dimension out of tolerance
  - Discolor of lens

■ Note：It is required that the LEDs should be attached heat-sink when these LEDs are Operating.