

Full **SPECTRUM** LED FS5N30N Series

Y	T	-	F	S	5	N	30	N
<i>Product Code</i>			<i>Color</i>	<i>Color Note</i>	<i>Size</i>	<i>Shape</i>	<i>Angle 2θ ½</i>	<i>Stand-Off</i>
			Full	Spectrum	5 mm	Normal	30°	No

FEATURES

- Single Lamp with 3 Original Colors Red, Blue, and Green
- Triple Chips Embedded
- Multiple Colors Compose Full Spectrums
- Electricity Control IC Embedded
- Fancy, Fun, Hottest in the Market
- Water Clear Epoxy Package
- Lens Size with 5mm / 6.5mm / 8 mm / 10 mm options
- Viewing Angles 30°
- Stand-Off Options

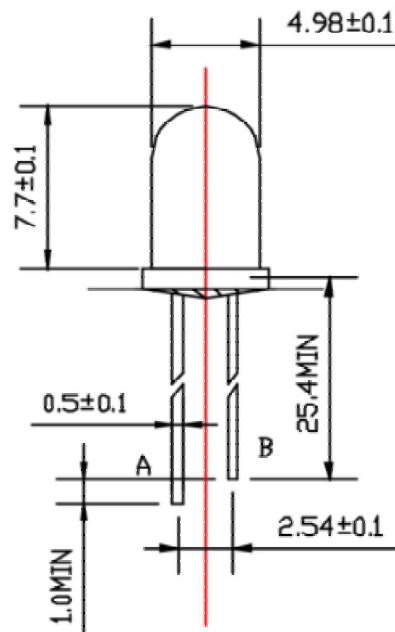
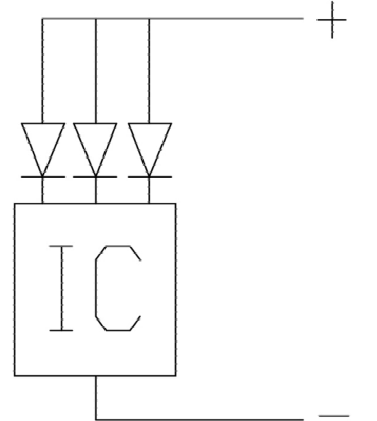
BENEFITS

- New Trend Creations
- Low Energy Consumptions
- Low Maintenance Costs
- High Application Design Flexibility
- High Reliability
- Prompt Shipment
- Very Competitive prices

APPLICATIONS

- Toys / Sports Utilities
- Miniature key chains
- Effect Lights
- Display / Decoration Lights
- Electronic Displays and Signals
- Interior Decoration Lights
- Outdoor Signals
- Indicator Lights
- Solar Energy Lights / Garden Lights

Package Dimensions



Notes:

1. All dimensions are in millimeters
2. Specifications are subject to change without notice.

CAUTION: *YT-FS5N30N* series LEDs are **Class 1 ESD** sensitive. Static Electricity and surge damage the LEDs. It is recommended to use a wristband or anti-electrostatic glove when handling LEDs. All devices, equipment and machinery must be properly grounded.

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Absolute Maximum Ratings at Ta = 25°C

Peak Forward Current (duty = 0.1, 1 KHz)	I _{fp}	100 mA
Derating Factor		0.40 mA/ °C
Reverse Current	I _r	100 μA
Operating Temperature	T _{op}	-30 ~ +85°C
Storage Temperature	T _{stg}	-30 ~ +85°C
Soldering Temperature	T _{sd}	260°C / 5 Sec

Recommend Ratings at Ta = 25°C

Power Switch / Power On		On Mode
Forward Voltage Range	V _f	4.5V ± 0.2 V
Low Standby Current	I _s	< 5 μA
Continuous Forward Current	I _f	90 mA
Crystal (One Second for 1.4 times)		1.4 Hz
Driver Current	I _d	25 mA
Power Consumption		0.405 W

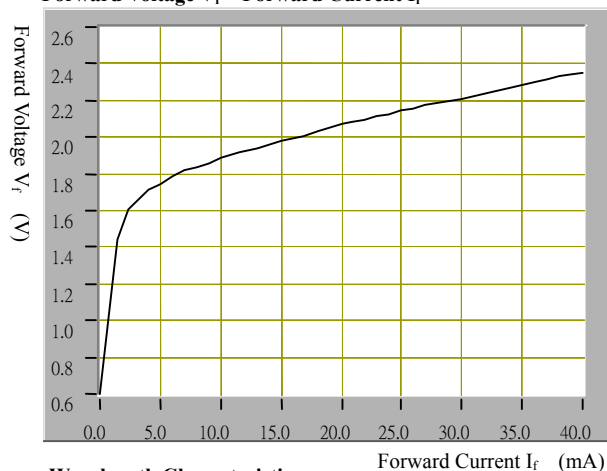
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Electrical / Optical Characteristics at Ta = 25°C

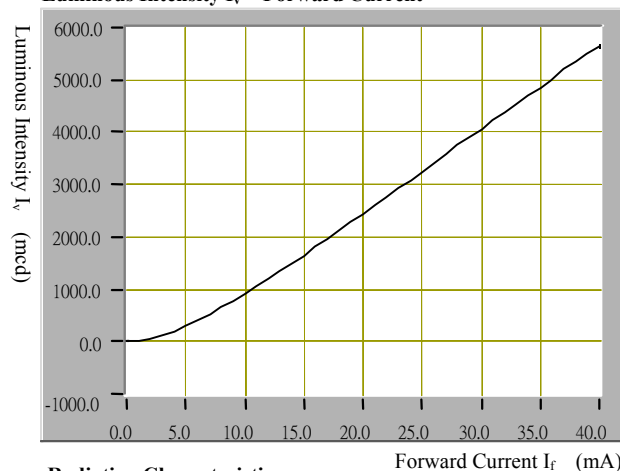
Red Color

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	V_f		2.13	2.26	V	$I_f = 20 \text{ mA}$
Luminous Intensity	I_v		1000		mcd	$I_f = 20 \text{ mA}$
Peak Emission Wavelength	λ_p		622	623	nm	
Viewing Angle	$2\theta \frac{1}{2}$		26		deg	

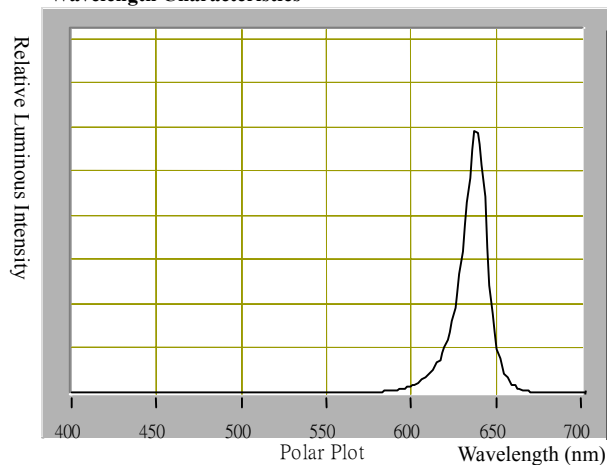
Forward Voltage V_f – Forward Current I_f



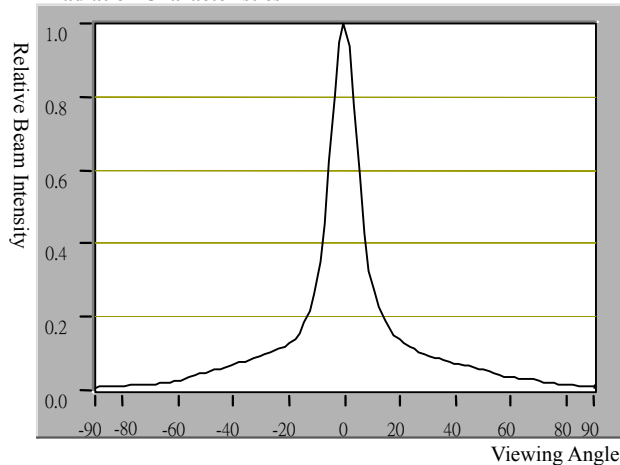
Luminous Intensity I_v – Forward Current



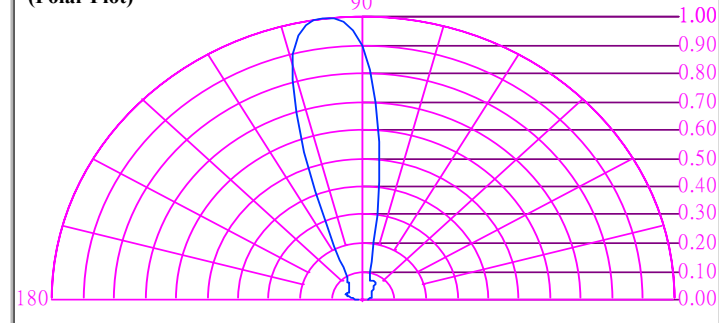
Wavelength Characteristics



Radiation Characteristics



Radiation Characteristics (Polar Plot)

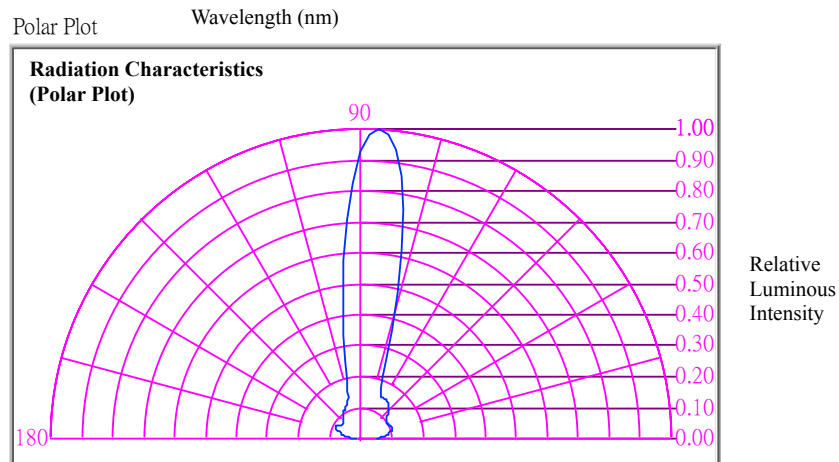
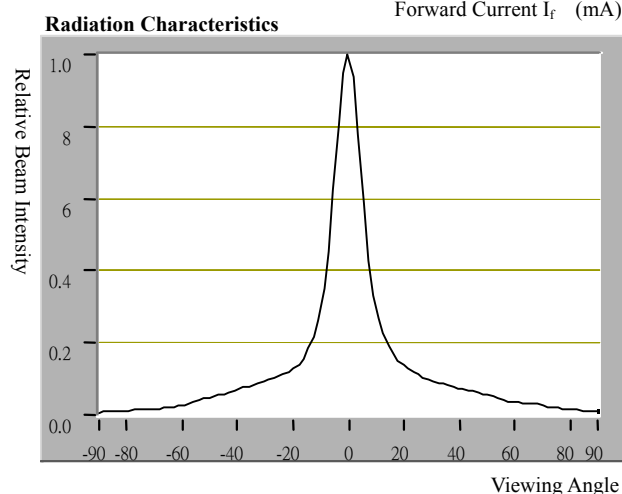
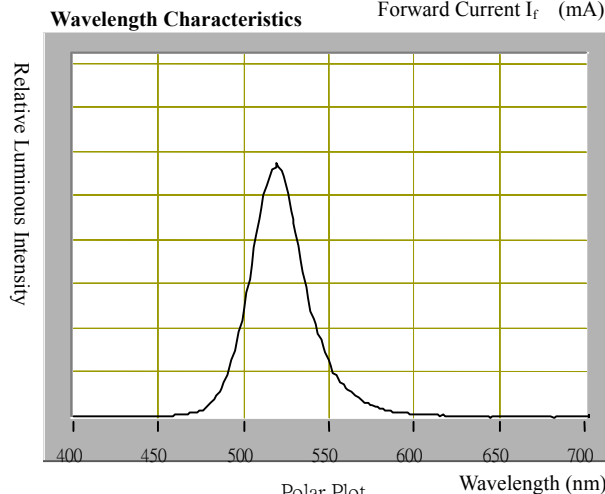
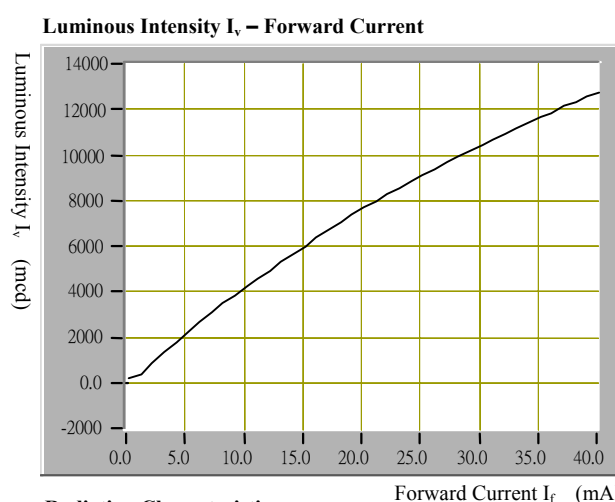
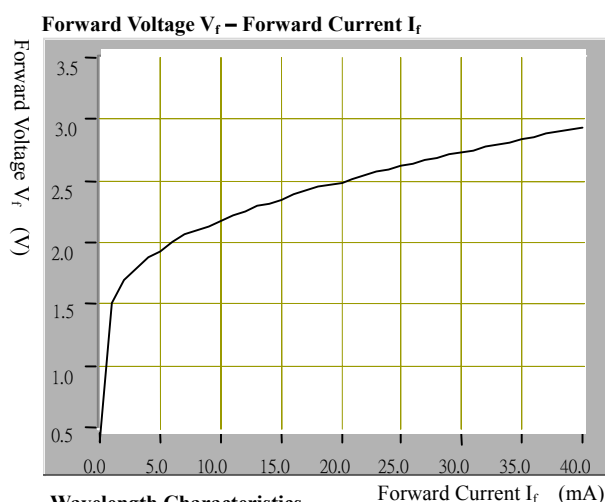


Relative
Luminous
Intensity

Y	T	-	F	S	5	N	30	N
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Green Color

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	V_f		3.5	4.0	V	$I_f = 20 \text{ mA}$
Luminous Intensity	I_v		1800		mcd	$I_f = 20 \text{ mA}$
Peak Emission Wavelength	λ_p		520	535	nm	
Viewing Angle	2θ ½		21.6		deg	

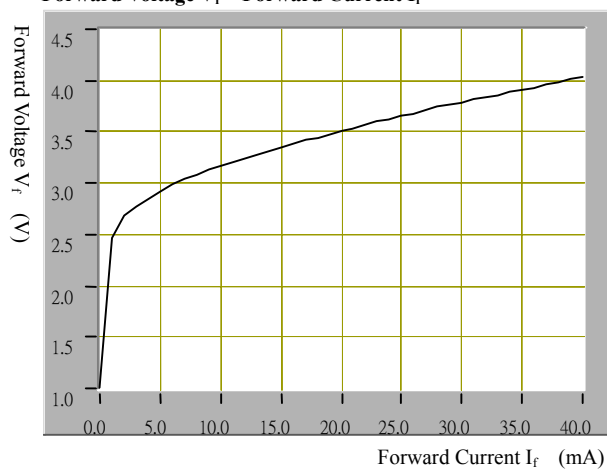


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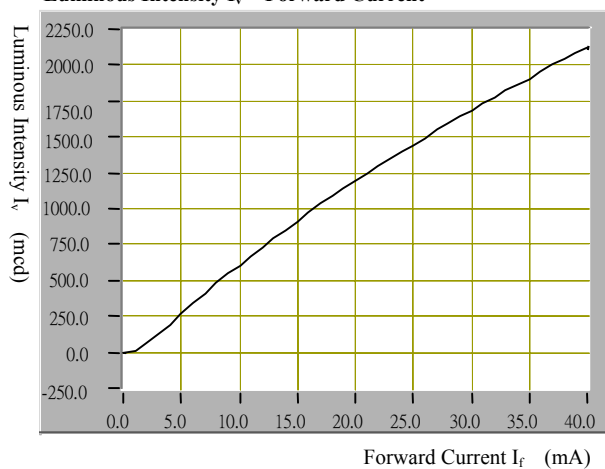
Blue Color

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	V_f		3.5	4	V	$I_f = 20\text{ mA}$
Luminous Intensity	I_v		550		mcd	$I_f = 20\text{ mA}$
Peak Emission Wavelength	λ_p		470	475	nm	
Viewing Angle	2θ ½		21.6		deg	

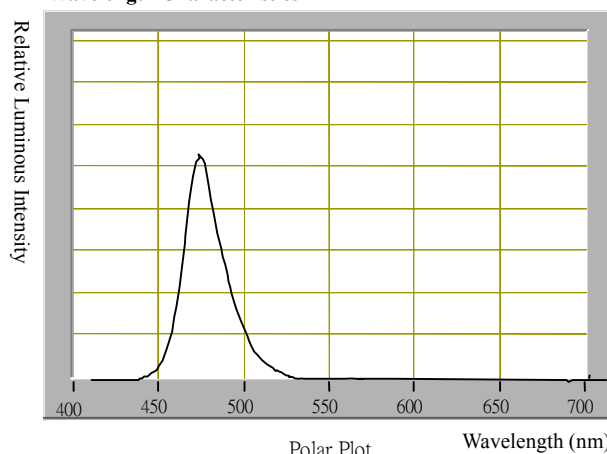
Forward Voltage V_f – Forward Current I_f



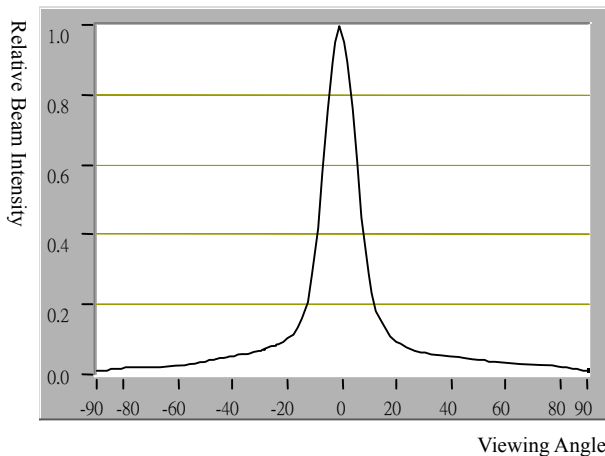
Luminous Intensity I_v – Forward Current



Wavelength Characteristics



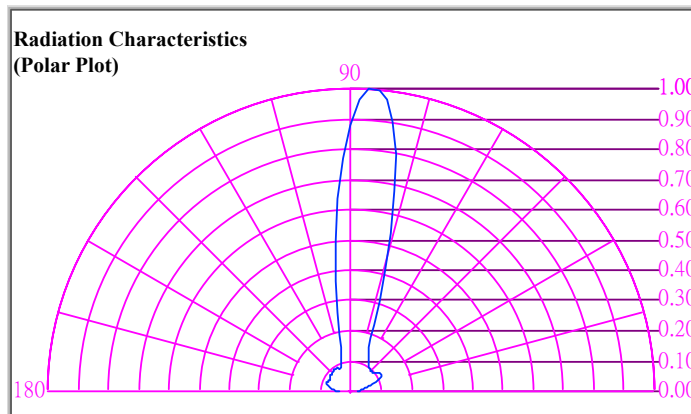
Radiation Characteristics



Polar Plot

Wavelength (nm)

Viewing Angle



Relative Luminous Intensity

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Examples of Color Shifting Sections (Control Mechanisms) at $V_f = 4.5V \pm 0.2V$

SEC1 (K1)		
Single Light On		
Red	Green	Blue
☀	X	X
X	☀	X
X	X	☀

SEC2 (K2)		
Two Light On		
Red	Green	Blue
☀	☀	X
X	☀	☀
☀	X	☀

SEC3 (K3)		
Continuously Light On		
Red	Green	Blue
☀	X	X
☀	☀	X
☀	☀	☀
X	X	X

SEC4 (K4)		
Single Light On		
Red	Green	Blue
☀	☀	☀
☀	☀	X
☀	X	X
X	X	X

SEC5 (K5)		
Simultaneously Light On		
Red	Green	Blue
☀	☀	☀
X	X	X

SEC6 (K6)		
7 Color / Full Spectrum		
Red	Green	Blue
☀	X	X
X	☀	X
X	X	☀
☀	☀	X
X	☀	☀
☀	X	☀
☀	☀	☀

SEC7 (K7)		
7 Color On & Off		
Red	Green	Blue
◇	X	X
X	◇	X
X	X	◇
◇	◇	X
X	◇	◇
◇	X	◇
◇	◇	◇

SEC0 (K0)		
SEC1+SEC6+SEC7		
SEC8 (K8)		
SEC1 ~ SEC7		

Notes:

- SEC 1 = 0.79 Sec
- SEC 2 = 0.81 Sec
- SEC 3 = 1.07 Sec
- SEC 4 = 1.07 Sec
- SEC 5 = 0.05 Sec
- SEC 6 = 1.80 Sec
- SEC 7 = 2.90 Sec
- ☀ = Light On
- X = Light Off
- ◇ = Slow Fade, Light On then Off
- Lens Size: 5mm / 6.5mm / 8mm / 10mm options
- Stand-off Options available
- Various of color shifting sections are controlled by embedded 4901 IC.

Note: All data showing in this product specification are measured by proper experiment conditions and instruments. However, those data may be different due to variations of testing instruments and conditions.

For information contact

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