

Features

- High reliability
- High radiant intensity
- Low power consumption
- Pb free
- This product itself will remain within RoHS compliant version.

Descriptions

- **HIRSDR209-3C/S530-A3** consists of an infrared and a visible light emitting diode , molded in a water clear plastic package.
- The device is spectrally matched with phototransistor , photodiode and infrared receiver module.

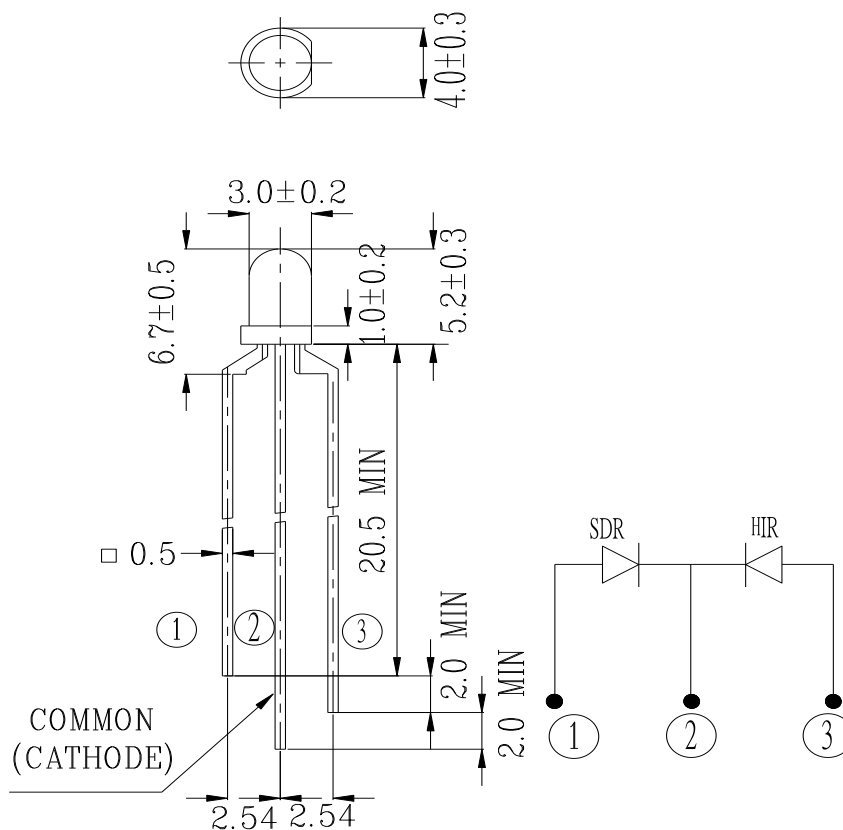
Applications

- Free air transmission system
- Infrared remote control units with high power requirement
- Smoke detector
- Infrared applied system

Device Selection Guide

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
IR	GaAlAs	Infrared	Water clear
SDR	AlGaInP	Super Deep-Red	

Package Dimensions



- Notes:**
1. All dimensions are in millimeters
 2. Tolerances unless dimensions ± 0.25 mm

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol		Rating	Units
Continuous Forward Current	I _F	SDR	25	mA
		IR	100	
Peak Forward Current	I _{FP}	SDR	60	mA
		IR	1.0	A
Reverse Voltage	V _R	SDR	5	V
		IR		
Operating Temperature	Topr	SDR	-40 ~ +85	°C
		IR	-40 ~ +85	
Storage Temperature	Tstg	SDR	-40 ~ +85	°C
		IR	-40 ~ +85	
Electrostatic Discharge	Esd	SDR	2000	V
Soldering Temperature	Tsol	SDR	260	°C
		IR		
Power Dissipation at(or below) 25°C Free Air Temperature	Pd	SDR	60	mW
Power Dissipation at(or below) 25°C Free Air Temperature		IR	150	mW

Notes: *1:SDR I_{FP} Conditions--Pulse Width ≤ 1000μs and Duty ≤ 10%

IR I_{FP} Conditions--Pulse Width ≤ 100μs and Duty ≤ 1%

*2:Soldering time ≤ 5 seconds.

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol		Condition	Min	Typ	Max	Unit
Luminous Intensity	I_V	SDR	$I_F=20\text{mA}$	10	200	--	mcd
Radiant Intensity	I_e	IR		4.0	10	--	mW/sr
Peak Wavelength	λ_p	SDR	$I_F=20\text{mA}$	--	650	--	nm
		IR		--	850	--	
Dominant Wavelength	λ_d	SDR	$I_F=20\text{mA}$	--	639	--	nm
Spectral Bandwidth	$\Delta \lambda$	SDR	$I_F=20\text{mA}$	--	20	--	nm
		IR		--	45	--	
Forward Voltage	V_F	SDR	$I_F=20\text{mA}$	--	2.0	2.4	V
		IR	$I_F=20\text{mA}$	--	1.4	1.7	
Reverse Current	I_R	SDR	$V_R=5\text{V}$	--	--	10	μA
		IR		--	--	10	
View Angle	201/2	SDR	$I_F=20\text{mA}$	--	20	--	Deg
		IR	$I_F=20\text{mA}$	--	40	--	

IR Typical Electro-Optical Characteristics Curves

Fig.1 Forward Current vs.
Ambient Temperature

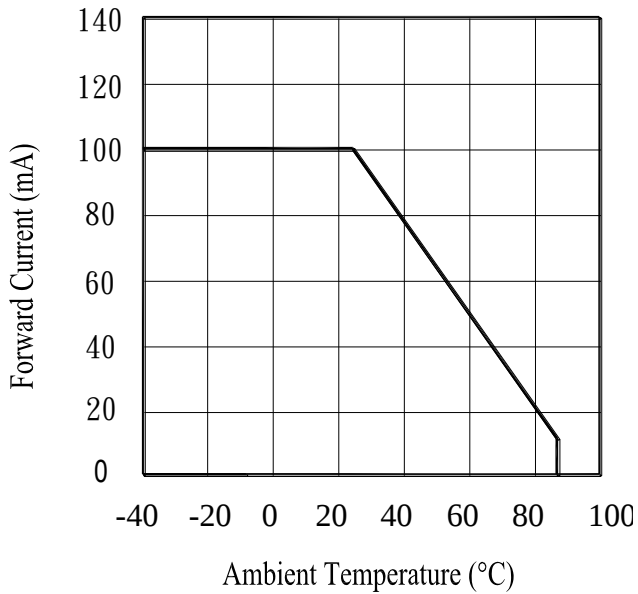


Fig.2 Spectral Distribution

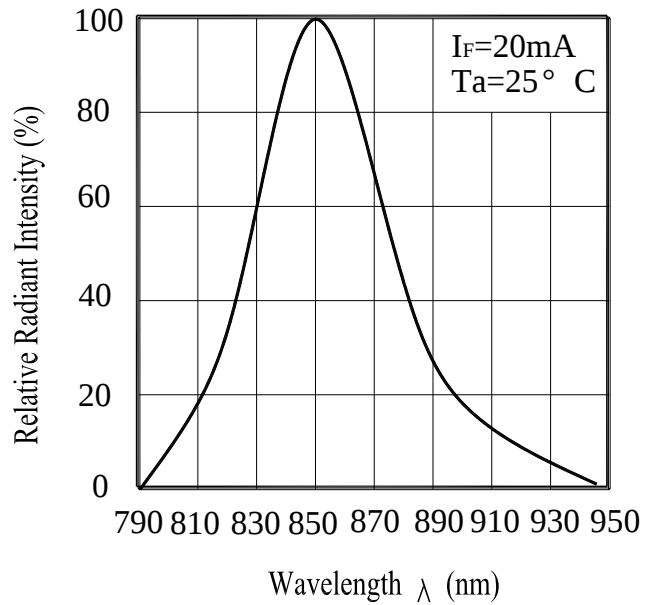


Fig.3 Peak Emission Wavelength vs.
Ambient Temperature

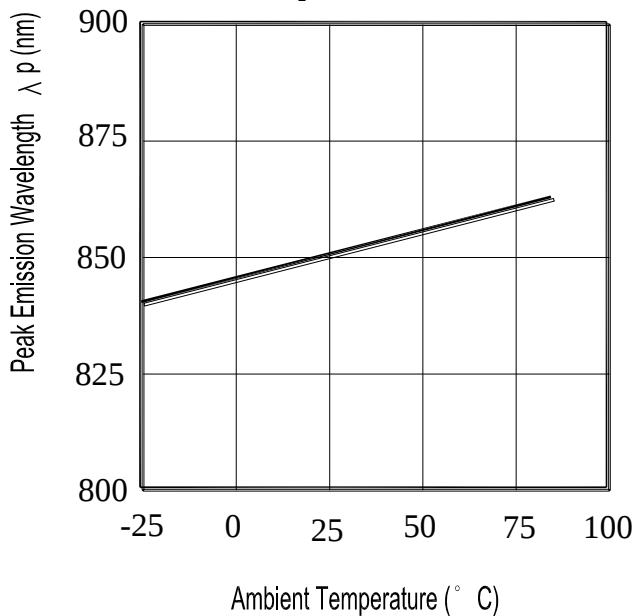
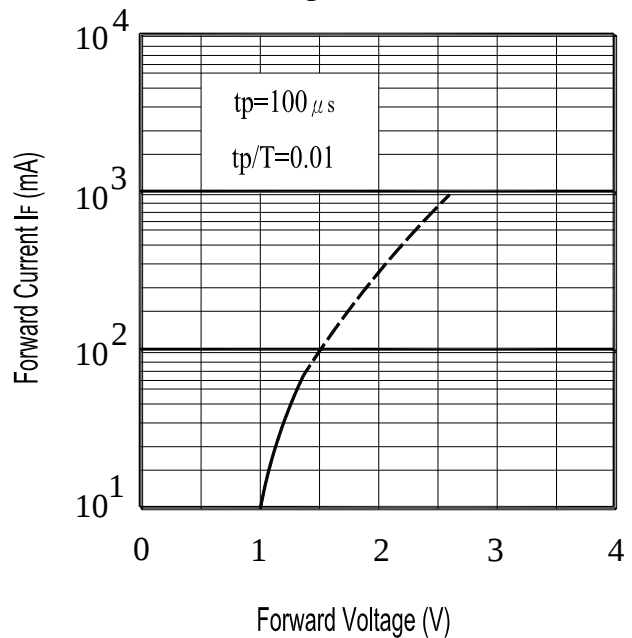


Fig.4 Forward Current vs.
Forward Voltage



IR Typical Electro-Optical Characteristics Curves

Fig.5 Radiant Intensity vs.

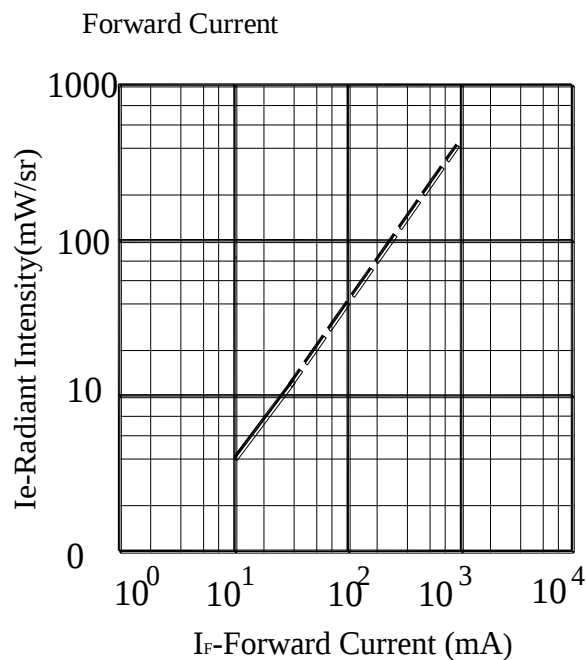
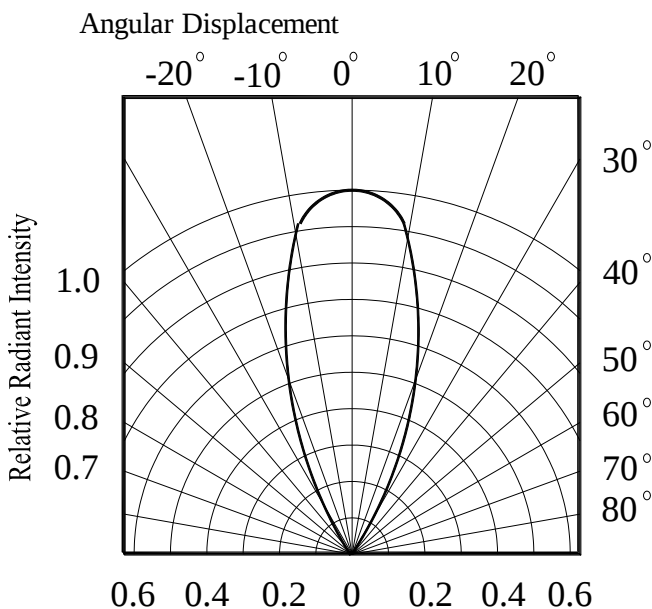


Fig.6 Relative Radiant Intensity vs.



SDR Typical Electro-Optical Characteristics Curves

Fig.1 Forward Current vs.

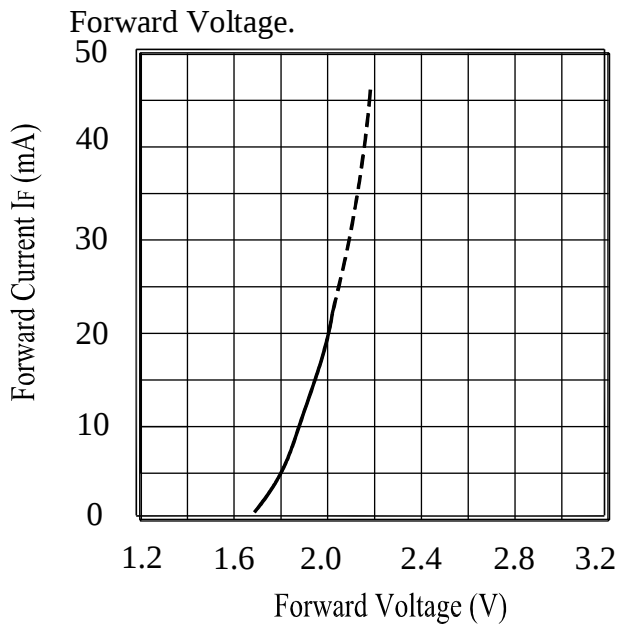


Fig.2 Spectral Distribution

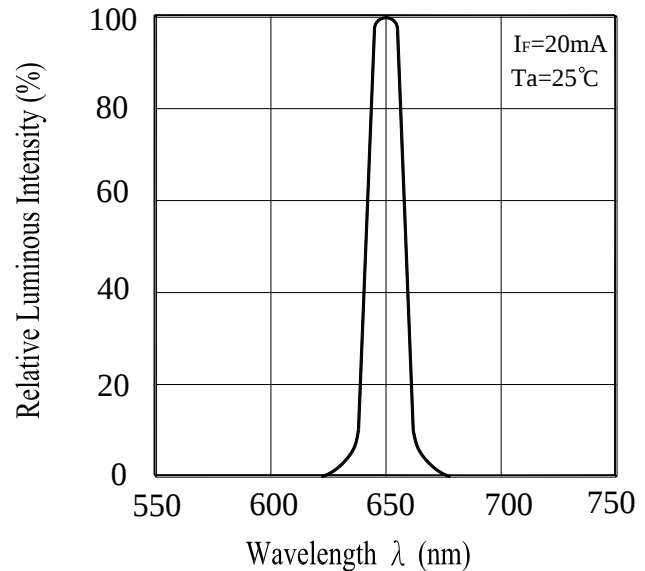


Fig.3 Relative Luminous Intensity vs.
Forward Current

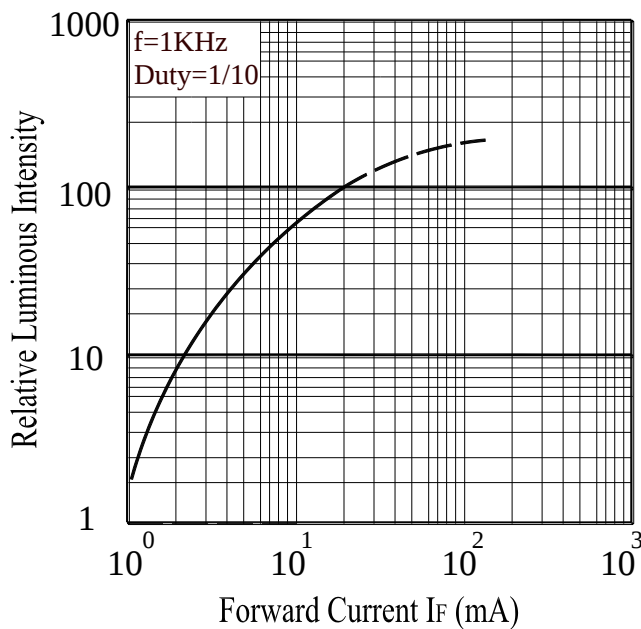
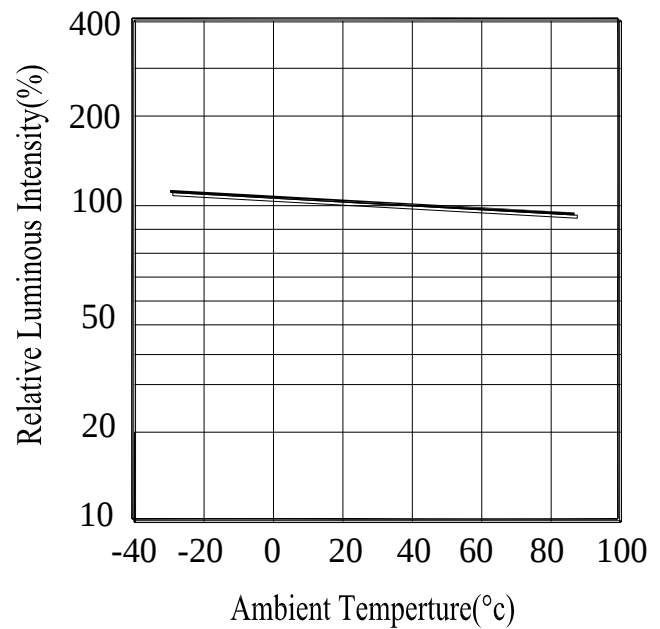


Fig.4 Relative Luminous Intensity vs.
Ambient Temperature



SDR Typical Electro-Optical Characteristics Curves

Fig.5 Forward Current vs.

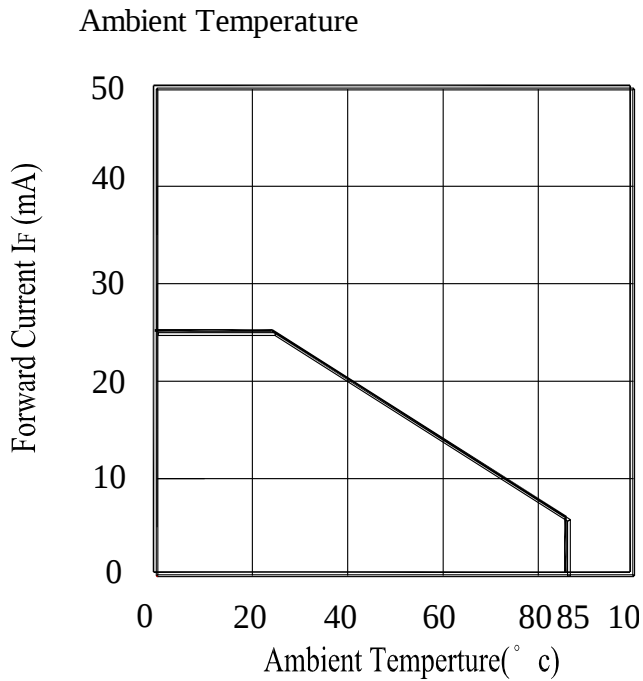
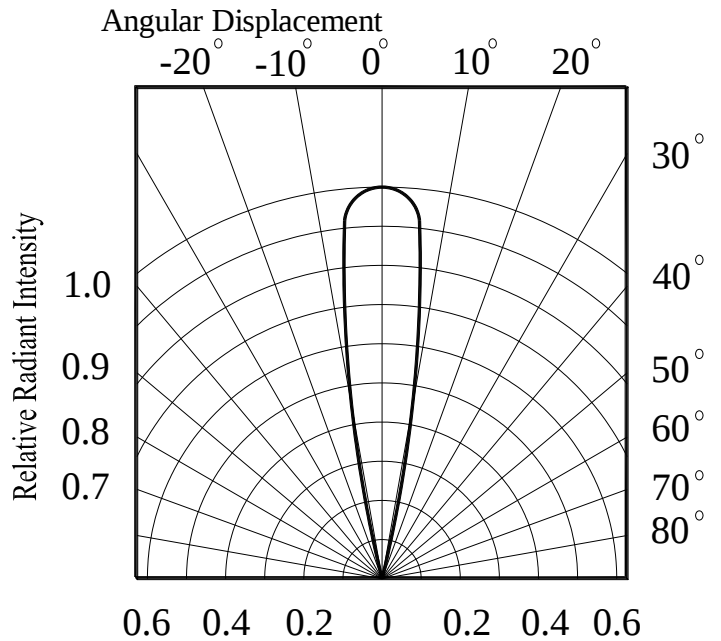


Fig.6 Relative Luminous Intensity vs.



Packing Quantity Specification

1. 1000PCS/1Bag,4Bags/1Box
2. 10Boxes/1Carton

Label Form Specification

		
CPN: P/N:		
		
HIRSDR209-3C/S530-A3		
QTY:	CAT:	
	HUE:	
LOT NO:	REF:	
		
Reference		
		

CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks

HUE: Peak Wavelength

REF: Reference

LOT No: Lot Number

X: Month

Reference: Identify Label Number

Notes

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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