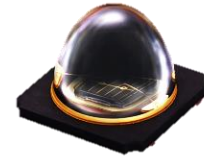




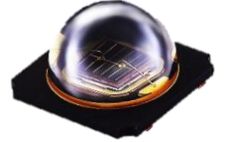
## Stanley Electric's High-Power IR LEDs

# High-power IR LED series

World's highest efficiency & low thermal resistance  
Highly reliable package



M\*N1107MS



M\*N1108MS

### ◆ Applications

Automotive			Industrial equipment	
DMS (Driver Monitoring System)	Occupant detection	Gesture control	Machine vision	Machine vision
Security				
Surveillance cameras / Traffic surveillance cameras	Automatic doors	Facial recognition / Iris recognition	Vein authentication	Vein authentication

### ◆ Features

- High luminous efficiency (radiant flux per power consumption: 611 mW/W or more)
- A line up that matches each application (distribution angle/peak wavelength)  
Distribution angle : ultra-narrow angle 45° / narrow angle 60° / wide angle 120°  
Peak wavelength : 755 nm / 810 nm / 855 nm / 945 nm
- Low heat generation design enables downsizing of the entire unit and reduction of heat dissipation costs

### ◆ Comparison of heat generated by Stanley's/other company's infrared LEDs

Maker	Stanley Electric IR LED※			Other company IR LED
	Board thickness	1.0mm	0.8mm	
Board material	Aluminum	Resin (FR4)		Aluminum
Driving current	500 mA	500 mA	600 mA	500 mA
Heat generation state				
Board max. temp.	36°C	49°C	57°C	57°C
Benefits on the unit side	Wide operating temp. (further low heat generation)	Reduced heat dissipation costs (resin substrate and miniaturization of heat dissipating parts)		-

※MGN110\*MS data



## Stanley Electric's High-Power IR LEDs

### ◆ Major applications and applicable wavelengths / products

Wavelength	755nm	810nm	855nm	945nm
<b>Main application</b>	Traffic monitoring system ANPR (Automatic Number Reading)	Iris recognition (driver authentication) Eye-controlled interface	Surveillance cameras, machine vision	Driver/Cabin monitoring 3D sensors, TOF sensors
<b>Radiant intensity</b> 1,000 mW/sr			<b>MJN1107MS (60°)</b>	<b>VMNN110CMS (45°)</b>
500 mW/sr	<b>FWR1107MS (60°)</b>	<b>VMKN1107MS (50°)</b>	<b>(V)MGN1107MS (60°)</b> <b>MJN1108MS (120°)</b>	<b>VMHN1107MS (60°)</b> <b>VMNN1108MS (120°)</b> <b>(V)MFN1107MS (60°)</b> <b>VMHN1108MS (120°)</b>
200 mW/sr	<b>FWR1108MS (120°)</b>		<b>(V)MGN1108MS (120°)</b>	<b>(V)MFN1108MS (120°)</b>

### ◆ Products specifications

Wavelength	755 nm		810 nm
Divergent half-angle	60 deg.		120 deg.
Product name	FWR1107MS		FWR1108MS
Radiant intensity (I <sub>e</sub> )	370 mW/sr		200 mW/sr
Radiant flux (Φ <sub>e</sub> )	680 mW		740 mW
Forward current (I <sub>F</sub> )	700 mA		700 mA
Forward voltage (V <sub>F</sub> )	1.8 V		1.8 V
Size (L x W x H)	3.8×3.8×2.8 mm		3.8×3.8×2.1 mm

Wavelength	855 nm					
Divergent half-angle	60 deg.			120 deg.		
Product name	VMGN1107MS	MGN1107MS	MJN1107MS	VMGN1108MS	MGN1108MS	MJN1108MS
Radiant intensity (I <sub>e</sub> )	530 mW/sr	530 mW/sr	840 mW/sr	280 mW/sr	280 mW/sr	440 mW/sr
Radiant flux (Φ <sub>e</sub> )	1,100 mW	1,100 mW	1,600 mW	1,100 mW	1,100 mW	1,600 mW
Forward current (I <sub>F</sub> )	1,000 mA	1,000 mA	1,000 mA	1,000 mA	1,000 mA	1,000 mA
Forward voltage (V <sub>F</sub> )	1.8 V	1.8 V	3.2 V	1.8 V	1.8 V	3.2 V
Size (L x W x H)	3.8×3.8×2.8 mm			3.8×3.8×2.1 mm		

Wavelength	945 nm							
Divergent half-angle	45 deg.	60 deg.			120 deg.			
Product name	VMNN110CMS	VMFN1107MS	MFN1107MS	VMHN1107MS	VMFN1108MS	MFN1108MS	VMHN1108MS	VMNN1108MS
Radiant intensity (I <sub>e</sub> )	1,160 mW/sr	440 mW/sr	440 mW/sr	750 mW/sr	230 mW/sr	230 mW/sr	420 mW/sr	470 mW/sr
Radiant flux (Φ <sub>e</sub> )	1,700 mW	950 mW	950 mW	1,630 mW	950 mW	950 mW	1,650 mW	1,710 mW
Forward current (I <sub>F</sub> )	1,000 mA	1,000 mA	1,000 mA	1,000 mA	1,000 mA	1,000 mA	1,000 mA	1,000 mA
Forward voltage (V <sub>F</sub> )	2.9 V	1.5 V	1.5 V	2.9 V	1.5 V	1.5 V	2.9 V	2.9 V
Size (L x W x H)	3.8×3.8×3.2 mm	3.8×3.8×2.8 mm			3.8×3.8×2.1 mm			