

## FEATURES

- High quantum efficiency: GaAsP / GaAs photocathode
- Pin output type (On-board type)
- Compact size



## SPECIFICATIONS

(at +25 °C)

Parameter			H14121-40	H14121-50	Unit
Input voltage			+11.5 to +15.5		V
Max. input voltage			+18		V
Max. input current <sup>①</sup>			12		mA
Max. output signal current			2		μA
Max. control voltage			+0.9 (Input impedance 30 kΩ)		V
Recommended control voltage adjustment range			+0.5 to +0.8		V
Effective area			φ5		mm
Photocathode material			GaAsP	GaAs	—
Spectral response			300 to 740	380 to 900	nm
Peak quantum efficiency wavelength			520	630	nm
Cathode	Quantum efficiency	at peak quantum efficiency wavelength	Min. 40	14	%
			Typ. 45	19	
	at 800 nm	Min. —	11		
		Typ. —	15		
Radiant sensitivity	at peak quantum efficiency wavelength	Min. 168	70	mA/W	
		Typ. 189	95		
	at 800 nm	Min. —	71		
		Typ. —	97		
Anode	Radiant sensitivity <sup>②</sup>	at peak quantum efficiency wavelength	Min. $1.0 \times 10^5$	$4.2 \times 10^4$	A/W
			Typ. $1.9 \times 10^5$	$9.5 \times 10^4$	
	at 800 nm	Min. —	$4.3 \times 10^4$		
		Typ. —	$9.7 \times 10^4$		
	Dark current <sup>②③</sup>	Typ.	3	4	nA
		Max.	10	12	
Gain <sup>②</sup>	Min.	$6.0 \times 10^5$		—	
	Typ.	$1.0 \times 10^6$		—	
Rise time <sup>②</sup>			Typ.	1.0	ns
Ripple noise <sup>②④</sup> (peak to peak)			Max.	0.6	mV
Settling time <sup>⑤</sup>			Max.	0.2	s
Operating ambient temperature <sup>⑥</sup>			+5 to +35		°C
Storage temperature <sup>⑥</sup>			-20 to +50		°C
Weight			Approx. 76		g

**NOTE:** ① At +15 V input voltage and +0.8 V control voltage in darkness

② Control voltage = +0.8 V

③ After 30 min storage in darkness

④ Load resistance = 1 MΩ, Load capacitance = 22 pF

⑤ The time required for the output to reach a stable level following a change in the control voltage from +0.9 V to +0.5 V.

⑥ No condensation

# PHOTOSENSOR MODULE H14121-40/-50

Figure 1: Typical spectral response

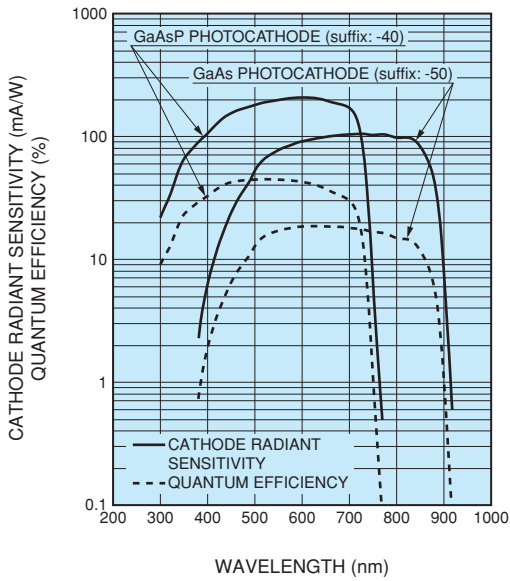


Figure 2: Typical gain

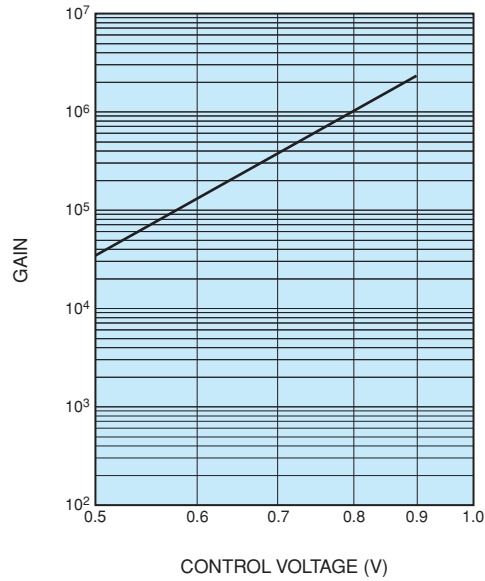


Figure 3: Sensitivity adjustment method

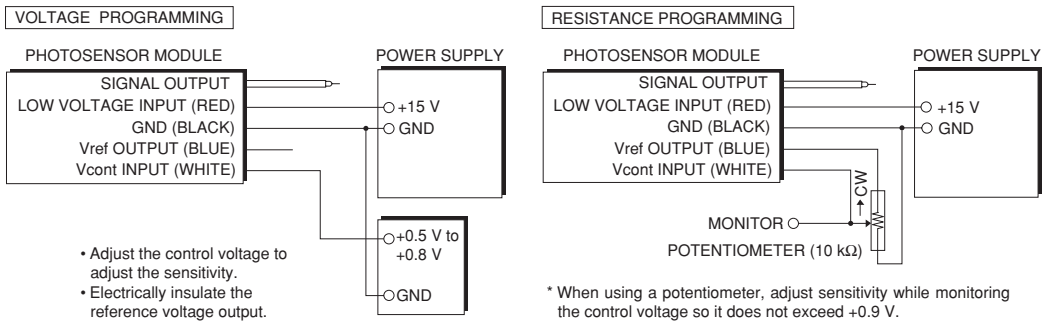
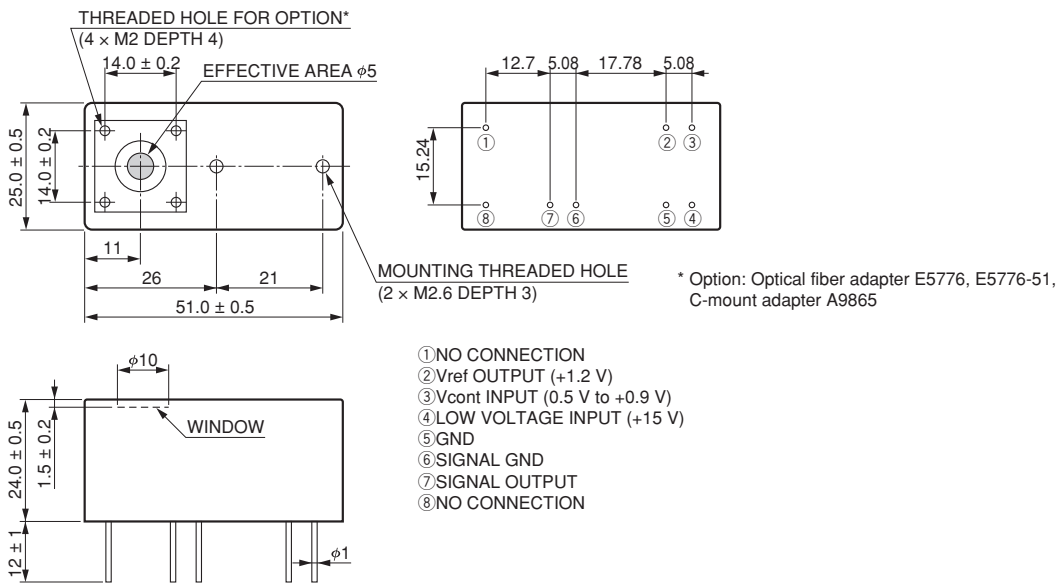


Figure 4: Dimensional outlines (Unit: mm)



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