HAMAMATSU

PHOTON IS OUR BUSINESS

PHOTOMULTIPLIER TUBE ASSEMBLY
H15547-07/H15547-40

FEATURES

- **Fast time response**
- **High time resolution**
- **Compact profile**
- **Long life time**
- **High detection efficiency**

APPLICATIONS

- **LIDAR (Light Detection and Ranging)**
- **TCSPC (Time-Correlated Single Photon Counting)**
- **FCS (Fluorescence Correlation Spectroscopy)**
- **HEP (High Energy Physics)**

SPECIFICATIONS

Parameter			H15547-07	H15547-40	Unit
Spectral response			160 to 850	280 to 720	nm
Wavelength of maximum response			430	550 to 650	nm
Window material			Synthetic silica	Borosilicate glass	—
Photocathode	Material		Multialkali	GaAsP	—
	Effective area		ϕ11	ϕ10	mm
MCP	Dynode structure		2 stages Microchannel plate		—
	Channel diameter		6		μm
Operating ambient temperature ①			-50 to +50		°C
Storage temperature ①			-50 to +50		°C
Max. supply voltage			-2400		V
Max. average anode current			100		nA
Cathode	Luminous sensitivity	Min.	100	400	μA/lm
		Typ.	180	700	
	Red White ratio	Typ.	0.15	—	—
Anode	Luminous sensitivity	Typ.	100	350	A/lm
	Dark current ②	Typ.	2	3	nA
		Max.	10	15	
Gain		Min.	1.0×10^5		—
		Typ.	5.6×10^5	5.0×10^5	
Time response	Rise Time	Typ.	190	200	ps
	Fall Time	Typ.	360	500	
	Width	Typ.	300	400	
	T.T.S. ③	Typ.	40	130	

NOTE: ①No condensation
②After 30 min storage in darkness
③T.T.S. (transit-time spread) is the fluctuation in transit time between individual pulse and specified as a FWHM (full width at half maximum) with the incident light having a single photoelectron state.This value negligible the jitter of the electronics about 30 ps.

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Figure 1: Typical spectral response

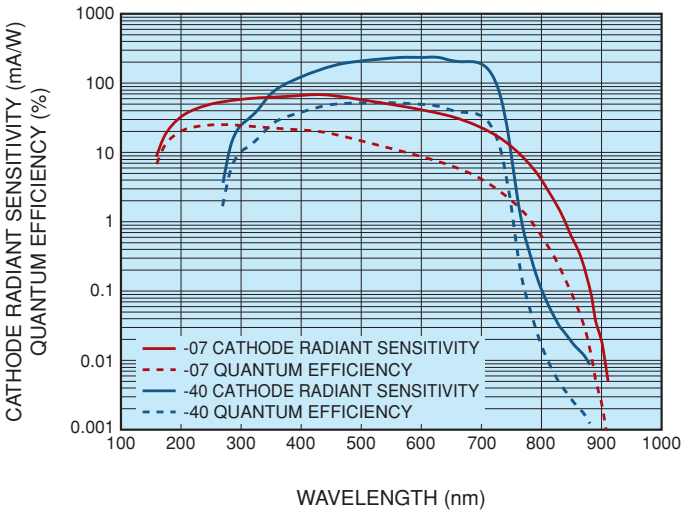


Figure 2: Typical gain

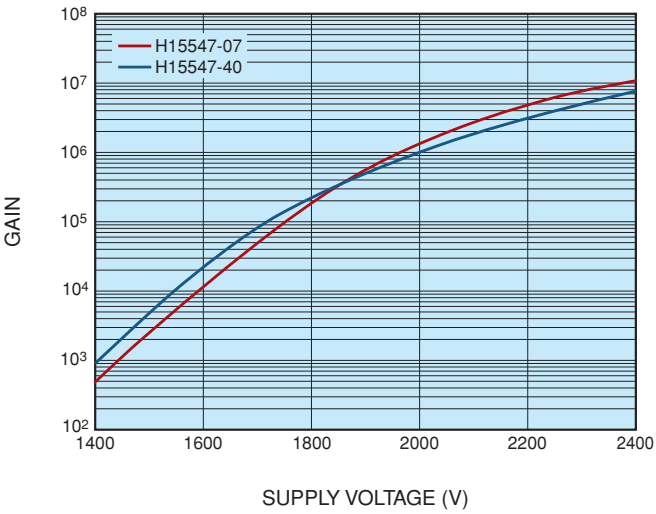


Figure 3: Typical output waveform (H15547-07)

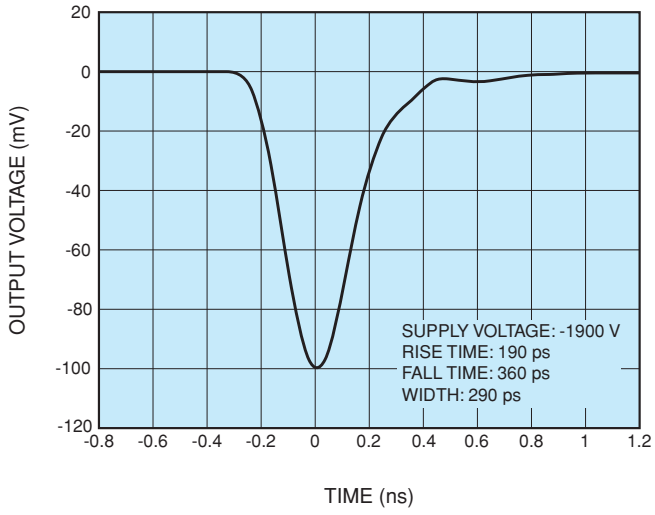


Figure 4: Typical transit time spread (H15547-07)

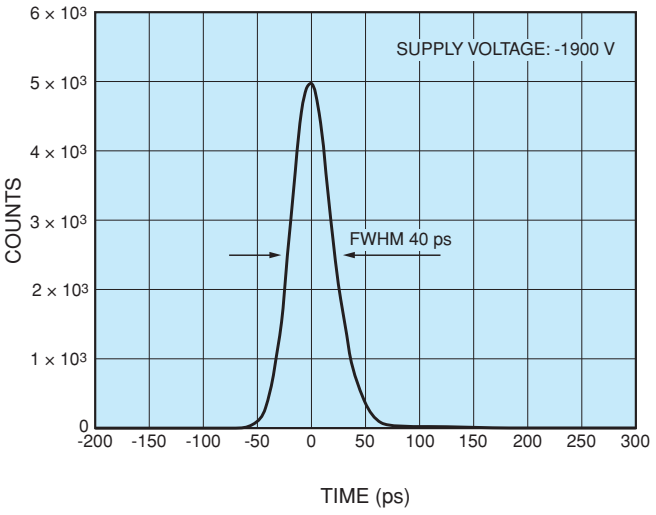
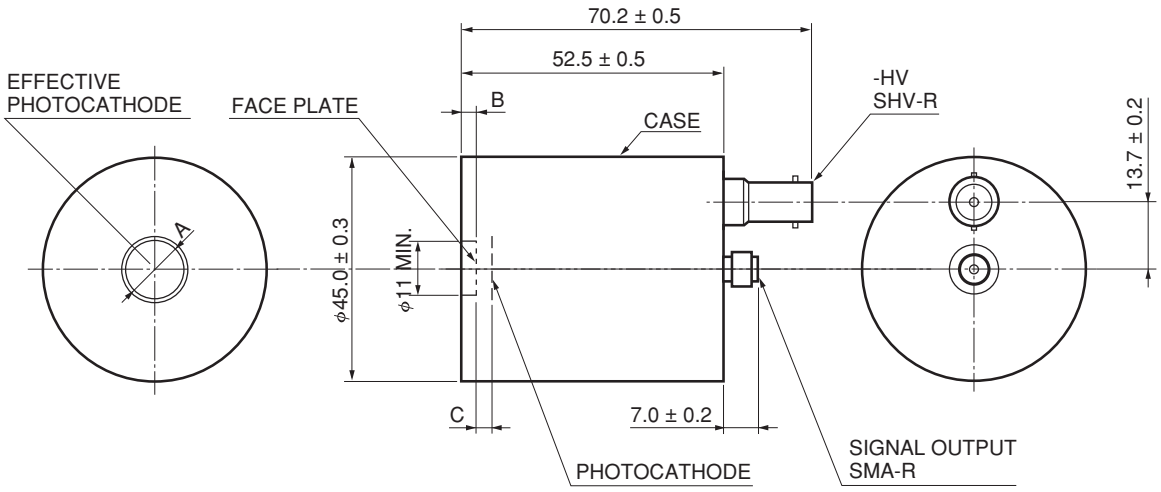
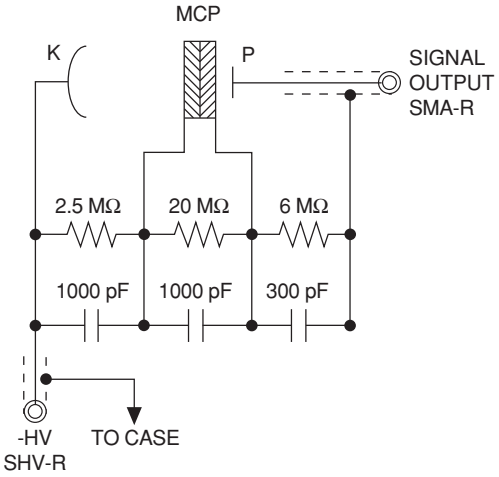


Figure 5: Dimensional outline (Unit: mm)



Suffix	A	B	C
-07	φ11 Min.	3.0 ± 0.2	3.2 ± 0.1
-40	φ10 Min.	2.8 ± 0.2	4.2 ± 0.1

Figure 6: Circuit diagram



Case is connected to GND inside of this product.

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