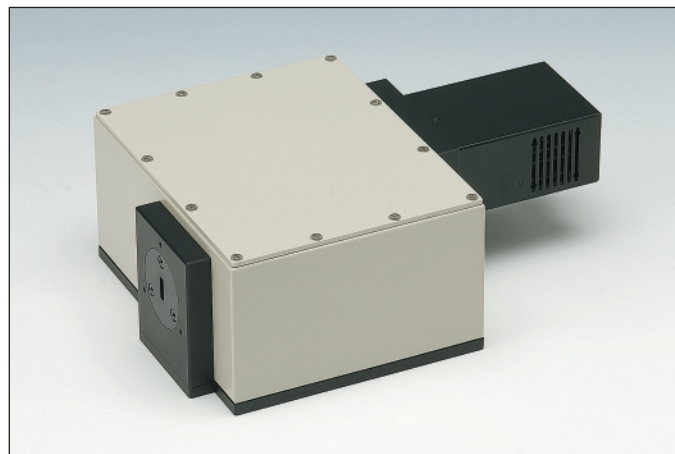


## HIGH SENSITIVITY COMPACT SPECTROMETER A10766

### OVER VIEW

High sensitivity compact spectrometer A10766 is a polychromator that is specially designed to couple with linear multianode PMT series. It makes spectrum analysis in high speed and high sensitivity by using with PMT assemblies, H10515B/H7260 series, and PMT modules, H11459/H11460 series. The most suitable PMT assembly or PMT module is determined depending upon required dispersion and spectral width. These PMT assemblies and modules are sold separately.



Ex. A10766 with PMT Module H11460 (sold separately)

### SPECIFICATIONS

Parameter	Description / Value	Unit
Focal length	Approx. 100	mm
F value	3.3	—
Spectral range	200 to 900 * <sup>1</sup>	nm
Grating mirror	Refer to * <sup>2</sup>	—
Center wavelength	You can choose in the spectral range * <sup>3</sup>	—
Effective area in X-axis of PMT	31.8 (32 ch) & 15.8 (16 ch) * <sup>4</sup>	mm
Input slit	0.7 (W) × 7 (H) * <sup>5</sup>	mm
Dimensions	163.5 (W) × 85 (H) × 159.5 (D) * <sup>6</sup>	mm
Height of optical axis from the bottom	45	mm
Applicable PMT / Module	H7260/H11460 (32 ch) & H10515B/H11459 (16 ch) * <sup>7</sup>	—

\*1: A spectral range can be defined with combination of PMT type and grating mirror. Please refer to a chart \*2.

\*2: Selection of grating mirrors

Groove Density (gr/mm)	Dispersion (nm/mm)	Spectral Width (nm)	
		H7260/H11460	H10515B/H11459
1200	6.3	197	99
900	8.7	275	138
600	13.6	428	214
300	28	—	441

Dispersion is defined when 500 nm is adjusted at the center channel of PMT.

The unit of dispersion is used as nm/mm. Because of 1 mm channel pitch of PMT, its dispersion is as same unit of nm/ch.

It is possible to choose blaze wavelength from 200 nm, 250 nm, 300 nm, 400 nm, 500 nm, 600 nm or 800 nm. However, there are not available grating mirror 300 gr/mm blaze 400 nm, 900 gr/mm blaze 200 nm and 800 nm.

\*3: It is a wavelength at center channel of PMT.

\*4: PMT effective area from 1st channel to the last one.

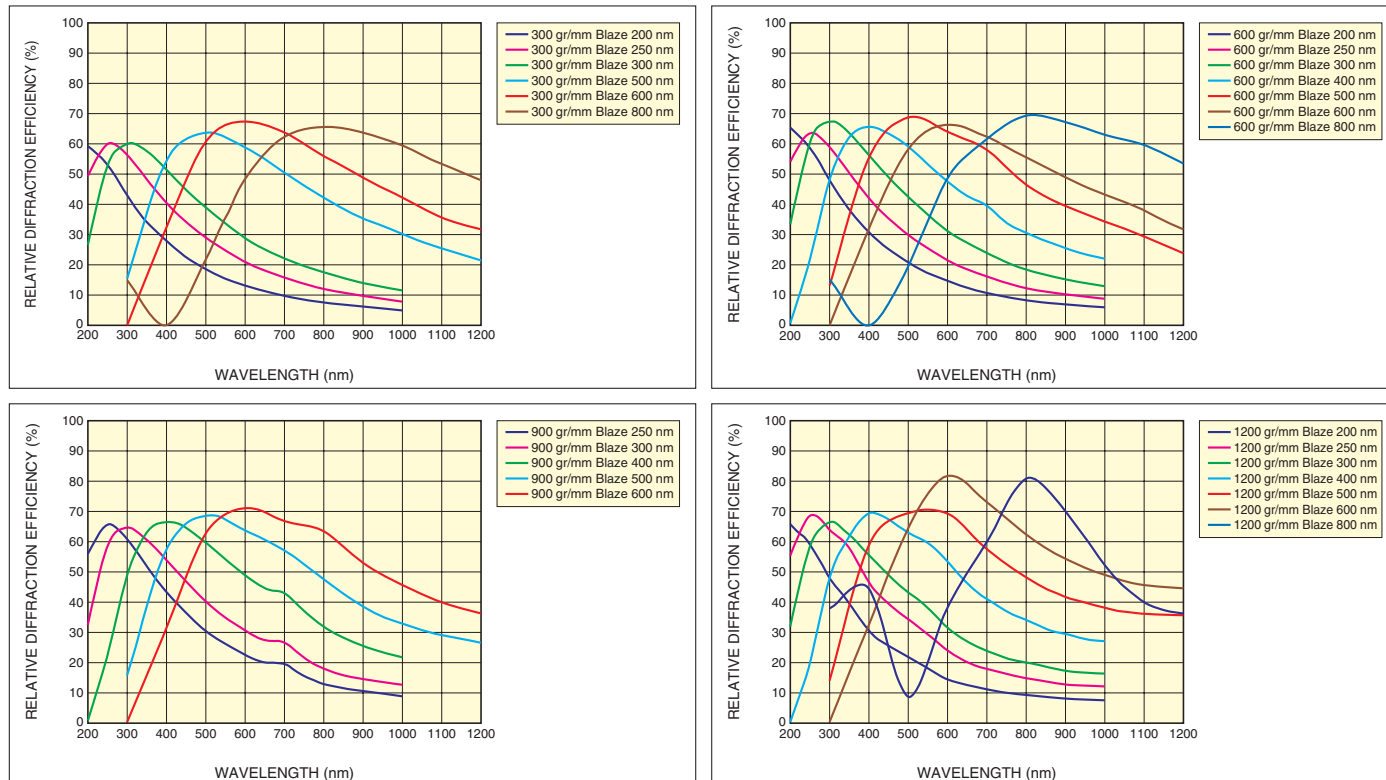
\*5: The width of slit is approx. 0.7 mm, although it would change depending on selected grating mirror and / or spectral range.

\*6: PMT, PMT module and fiber bundle are not included.

\*7: The assembling process to combine a PMT assemblies or PMT module with an A10766 can only be done at HAMAMATSU.

# HIGH SENSITIVITY COMPACT SPECTROMETER A10766

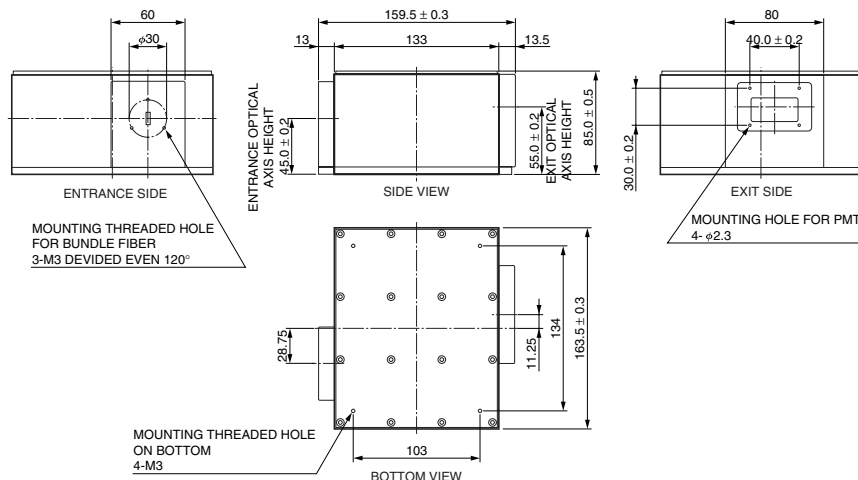
Figure 1: Typical grating relative diffraction efficiency curve



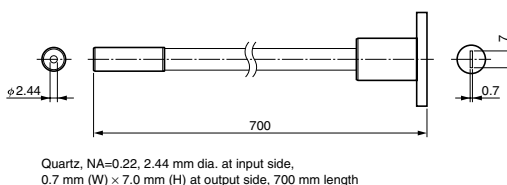
**NOTE:** Relative diffraction efficiency simulated in a littrow mounting with unpolarized light. The diffraction efficiency can vary significantly with the polarization of incident light. These data are obtained by simulated calculation, so this information is furnished for your information only. No warranty, expressed or implied, is created by furnishing this information. There are not available grating 300 g/mm blaze 400 nm, 900 g/mm blaze 200 nm and 800 nm.

Figure 2: Dimensional outline (Unit: mm)

## ●Polychromator A10766



## ●Bundle fiber (sold separately)



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