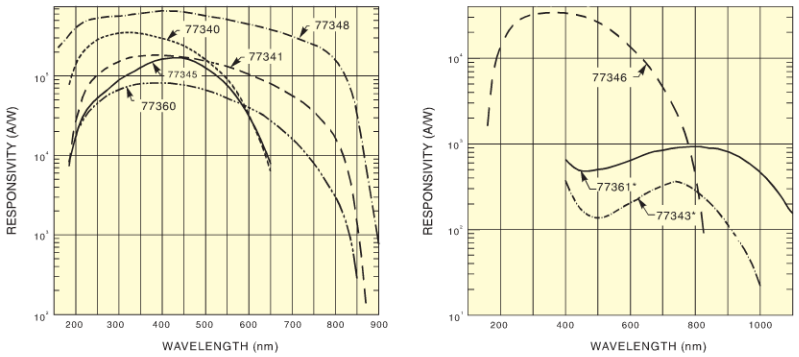
Photomultiplier Tubes for Optical Power Meter

ORIEL INSTRUMENTS
A Newport Corporation Brand



Typical responsivity curves of photomultiplier tubes.

Photomultiplier tubes (PMTs) offer a most cost effective, low light level measurement solution. Because the permutations are many, we don't offer complete PMT systems for the 1935-C and 2935-C Series of Optical Power Meters, but rather offer the components so you can "build" your own system. Here, we give you an overview of the PMT family, and offer guidance in choosing the components. For more detailed information on the tubes and their housings, refer to page 1225.

The Choices

You need to answer two questions in order to choose the appropriate PMT components to build a system:

1. What wavelength range do you need?

We have PMTs that are sensitive in the UV, as low as 160 nm, and in the NIR as high as 1100 nm (see the responsivity curves).

2. Do you want a side-on or end-on PMT?

Side-on PMTs are more economical; the end-on systems have a larger photocathode area and have a more uniform responsivity.

What Do I Need to Build a System?

To build a complete PMT System for use with the 1935-C/2935-C Optical Power Meter, you will need:

- End-on or Side-on PMT (detailed on page 1225)
- 70690 Side-on or 70691 End-on PMT Housing (these are the same as the PMT housings described on page 1225, but with the proper cables to connect to the 1935-C or 2935-C Series Optical Power Meter)
- 70705 PMT Power Supply (detailed on page 1246)
- 1935-C or 2935-C Series Optical Power Meter

- High sensitivity UV detectors
- Easy to use
- End-on and Side-on models

Ordering Information

Photomultiplier Tubes

Model	Description
77340	Photomultiplier Tube, Side-On, 185-650 nm, 340 nm Peak Wavelength
77341	Photomultiplier Tube, Side-On, 185-870 nm, 330 nm Peak Wavelength
77343	Photomultiplier Tube, Side-On, 400-1100 nm, 730 nm Peak Wavelength
77348	Photomultiplier Tube, Side-On, 160-900 nm, 400 nm Peak Wavelength
77360	Photomultiplier Tube, Side-On, 185-850 nm, 420 nm Peak Wavelength
77346	Photomultiplier Tube, End-On, 185-850 nm, 420 nm Peak Wavelength
77361	Photomultiplier Tube, End-On, 400-1100 nm, 800 nm Peak Wavelength

Model	Wavelength Range	Peak Wavelength	Cathode Responsivity*	Photocathode Size	NEP* ($W\ Hz^{-1/2}$)	Supply Voltage
77340	185-650	340 nm	48 mA/W	8 x 24 mm^2	1.4×10^{-16}	1000
77341	185-870	330 nm	40 mA/W	8 x 24 mm^2	2.8×10^{-16}	1000
77343	400-1000	730 nm	1.9 mA/W	8 x 24 mm	1.2×10^{-13}	1250
77348	160-900	400 nm	68 mA/W	8 x 24 mm	1.2×10^{-16}	1000
77360	185-850	420 nm	70 mA/W	8 x 16 mm	5.0×10^{-16}	1000
77346	185-850	420 nm	64 mA/W	25 mm dia.	6.6×10^{-16}	1000
77361	400-1100	800 nm	1.9 mA/W	25 mm dia.	4.2×10^{-13}	1250

*Typical values at the supply voltage listed.

Accessories

WEB See our website for more info

Model	Description
70680	Photomultiplier Tube Housing, Side-On, DC or Pulsed (<10 µs)
77265	Photomultiplier Tube Housing, End-On, DC or Pulsed (<10 µs)
70705	PMT Power Supply
70710	Current Preamplifier
70703	Laboratory Power Supply, +/- 15 VDC, 115 VAC
70709	Laboratory Power Supply, +/- 15 VDC, 230 VAC

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Photomultiplier Tubes and Detectors

Photodiode Detectors

- **A variety of Oriel detectors working with latest Newport power meters**
- **End-on and side-on PMTs**
- **Si, Ge, and InGaAs semiconductor detectors**
- **Highly sensitive thermopiles complementing existing Newport thermal detectors**

Photomultiplier Tubes in Side-on and End-on Housings.

These Oriel Photomultiplier tubes (PMTs), semiconductor detectors and thermal detectors are designed to work with Newport's latest power meters. They come with a 15DB connector adapter so that they can be connected to the power meters. Both side-on and end-on PMTs are available. Semiconductor detectors include Si, InGaAs, and Ge detectors, either calibrated or non-calibrated. The Oriel miniature thermopile detectors boast broad spectral response between 0.2 to 40 um.

Please reference these pages for compatible power meters.
see page 1133, 1137, 1139.