

Model 1120 Reflex Viewing Module

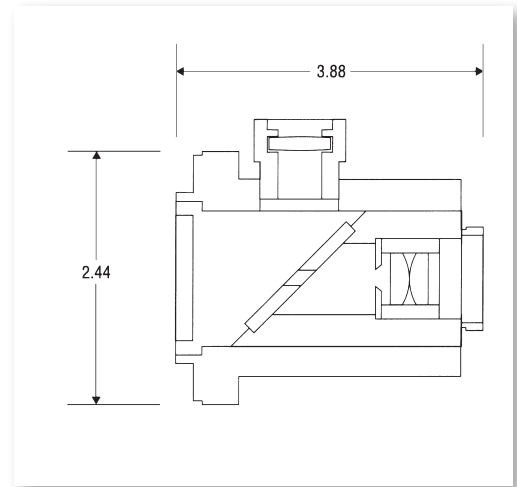
PRODUCT SUMMARY

Since the Model 1120 provides a direct view of the measurement field, it is ideal for CRT measurements of a single pixel, small pixel cluster, or narrow scan line. But it also enables users to measure distant objects, small light sources, or to survey the distribution of light across luminous surfaces.

This accessory operates like a camera viewing system, since it splits the measurement and viewing fields. When attached to the front of the 1120, a camera lens or microscope objective focuses an object at the center of the internal 45° mirror. The user sees the object as an upright image in the eyepiece. A small hole in the center of the mirror allows a portion of the image to pass through. Then, it is imaged by a relay lens onto the 211 sensor. To the user, the hole appears as a black spot on the object, corresponding to the actual area measured.

The Model 1120's field-of-view is established by the focal length of the lens affixed to it. Adapters are available to accept camera lenses or microscope objectives, converting the 1120 into a microphotometer or a telephotometer. Since UDT offers a variety of lens accessories, a system can be constructed to fit most any working-distance versus measurement-field-size requirement.

To ensure accuracy, the Model 1120 must be calibrated with each lens/aperture with which it is used. These calibrations are expressed in footlamberts or cd/m^2 .



Compatibility Model 211 Sensor Head

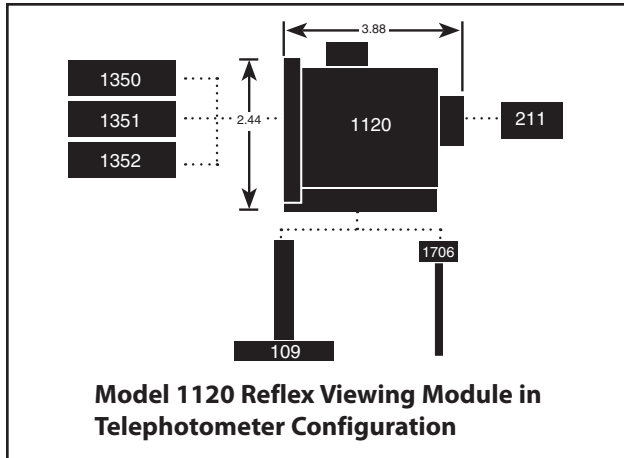
UDT INSTRUMENTS

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Model 1120 Reflex Viewing Module

SPECIFICATIONS

MODEL 1120 REFLEX VIEWING MODULE IN TELEPHOTOMETER CONFIGURATION



Telephotometer Configuration List

1120	Reflex viewing module
211	Photometric sensor head
1350	Lens, 50 mm
1351	Lens, 55 mm Macro
1352	Lens, 135 mm
1706	Tabletop Tripod
109	Heavy-duty lab stand

Telephotometer Lens Performance Specifications

Lens Model #	focal length	f/#	Minimum focal distance(m)	internal limiting measurement field-of-view	Aperture size (mm)	Typical sensitivity (A/fl)
1350	50 mm	f/1.8	0.4	3.3 °	4.0	10 ⁻¹⁰
1351	55 mm Macro	f/2.8+	0.2 for 1:1 conjugates	3.3 °	1.6	1.8 x 10 ⁻¹⁰
1352	135 mm	f/2.8	2.1	1.3 °	4.0	1.2 x 10 ⁻¹⁰

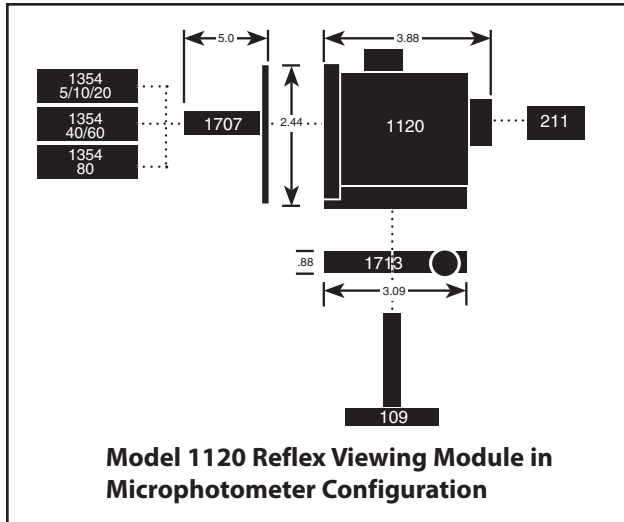
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SPECIFICATIONS

MODEL 1120 REFLEX VIEWING MODULE IN MICROPHOTOMETER CONFIGURATION



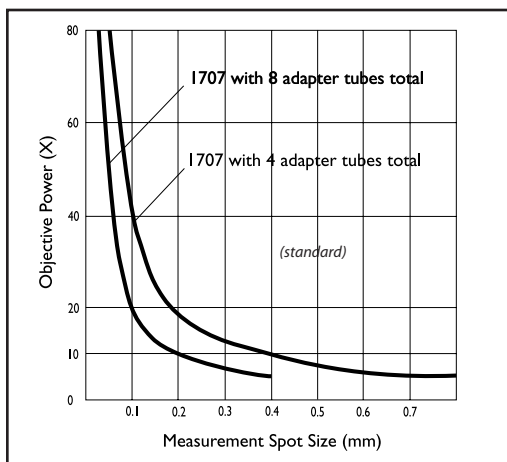
Microphotometer Configuration List

1120	Reflex viewing module
211	Photometric sensor head
1713	Rack and pinion focus mount
1707	Micro-adapter tube (includes 4 1-inch adapter tubes)
1354-5/10/20	5x, 10x, or 20x microscope objectives
1354-40/60	40x or 60x microscope objectives
109	Heavy-duty lab stand

Microphotometer Lens Performance Specifications

Microscope Objective Lens Measurement Spot Size

Model #	Power	focal length	NA	working distance	1707 with 4 adapter tubes	typical sensitivity (A/fl)	1707 with 8 adapter tubes	typical sensitivity (A/fl)
1354-1	1x	1.36mm			2.60mm		1.30mm	
1354-5	5x	30mm	10	20mm	0.8mm	9.8×10^{-12}	0.4mm	3.7×10^{-12}
1354-10	10x	16mm	3	6mm	0.4mm	8.7×10^{-12}	0.2mm	3.4×10^{-12}
1354-20	20x	9mm	2	3.2mm	0.25mm	6.0×10^{-12}	0.1mm	2.5×10^{-12}
1354-40	40x	5mm	1.5	0.3mm	0.1mm	3.7×10^{-12}	0.06mm	1.6×10^{-12}
1354-60	60x	3mm	1.2	< 0.3mm	0.07mm	2.3×10^{-12}	0.04mm	9.8×10^{-12}



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