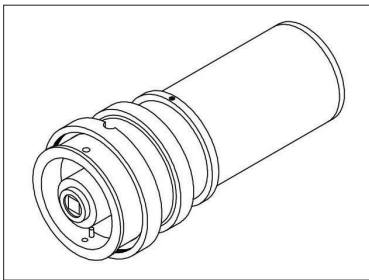


OL SERIES 750

High Sensitivity Detectors

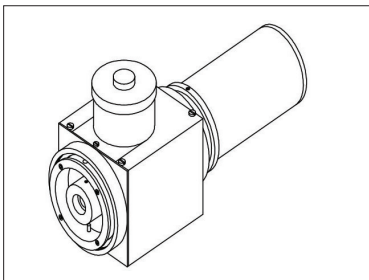
A large selection of high-sensitivity detector modules is available for use with the OL Series 750 Automated Spectroradiometric Measurement Systems. These detectors enable the OL Series 750 to effectively cover the entire wavelength range of 0.2 to 30 μm .

OL 750-HSD-300 SILICON DETECTOR



Each high sensitivity detector module consists of two parts: the detector head and the detector support module. The detector head contains the detector element and thermoelectric or LN2 cooler (if applicable). The detector support module contains the high sensitivity preamplifier and detector bias electronics. An ultra low-noise connector is used to interface the detector head to the detector support module. By locating the preamplifier physically close to the detector, the optimum performance is realized.

OL 750-HSD-360 INSB DETECTOR



The acquisition, amplification, and mode of signal processing are designated as the Signal Detection System. The OL Series 750 can be obtained with one or more of the following Signal Detection Systems:

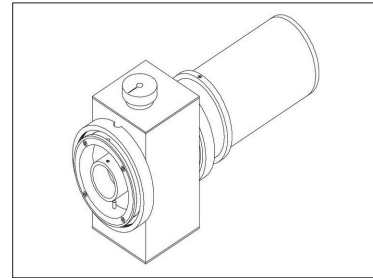
DC Amplification (OL 750-SDS-210).....DC

AC Lock-In Amplification (OL 750-SDS-220).....AC

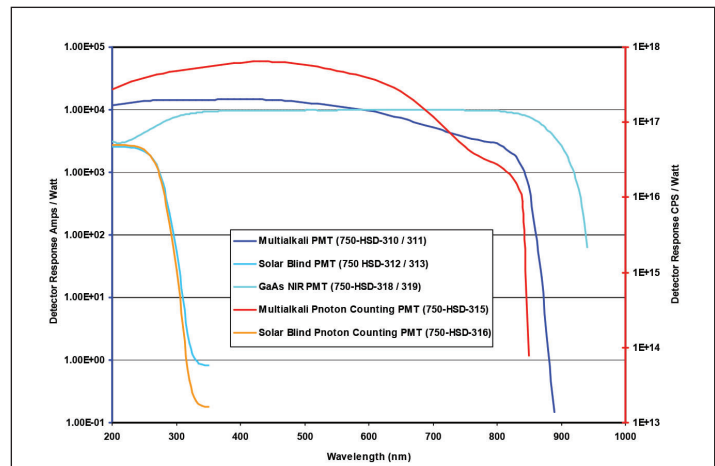
Accordingly, each High Sensitivity Detector is optimized for use with a specific Signal Detection System. This unique feature enables the user to optimize the overall system sensitivity for

any application by coupling the Signal Detection System with the most appropriate High Sensitivity Detector.

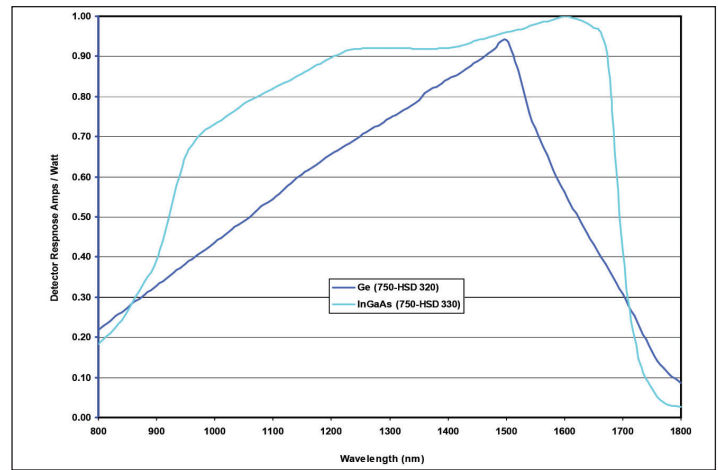
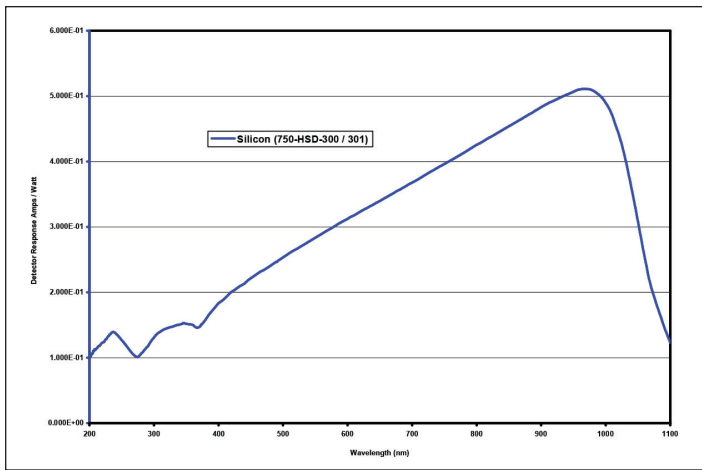
OL 750-HSD-310 PMT DETECTOR



A listing of the OL Series 750 High Sensitivity Detectors along with general specifications is given on page 3. Spectral response curves are given on pages 1, 2 & 3.

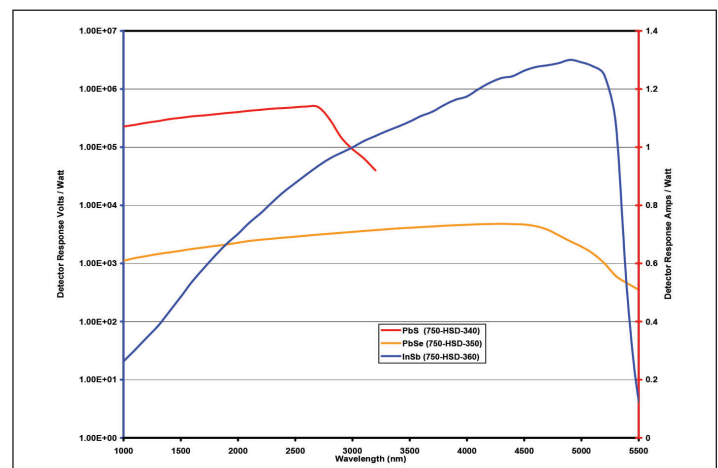
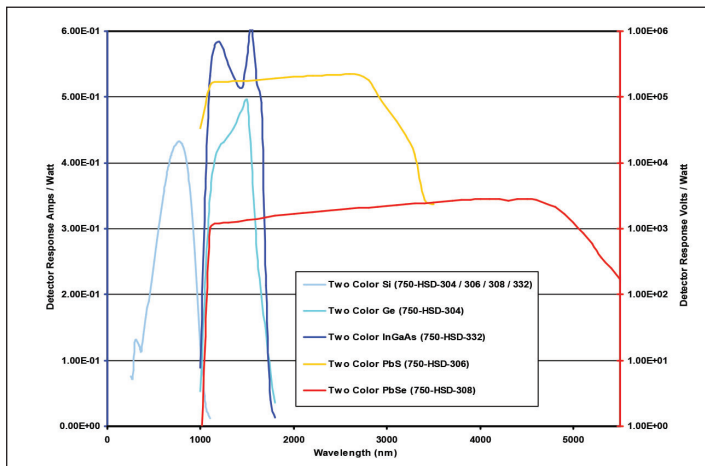


ULTRAVIOLET – VISIBLE – NEAR IR			
750-HSD	TYPE ^{1/}	MODE ^{2/}	PEAK RESPONSIVITY
-310	PMT	(AC)	1.5×10^4 A/W
-311	PMT	(DC)	1.5×10^4 A/W
-312	PMT	(AC)	2.5×10^3 A/W
-313	PMT	(DC)	2.5×10^3 A/W
-318	PMT	(AC)	1.0×10^4 A/W
-319	PMT	(AC)	1.0×10^4 A/W



ULTRAVIOLET – VISIBLE – NEAR IR			
750-HSD	TYPE ^{1/}	MODE ^{2/}	PEAK RESPONSIVITY
-300	Si	(AC)	0.5 A/W
-301	Si	(DC)	0.5 A/W

NEAR IR			
750-HSD	TYPE ^{1/}	MODE ^{2/}	PEAK RESPONSIVITY
-320	Ge	(AC)	0.94 A/W
-321	Ge	(DC)	0.94 A/W
-330	InGaAs	(AC)	1.00 A/W
-331	InGaAs	(DC)	1.00 A/W

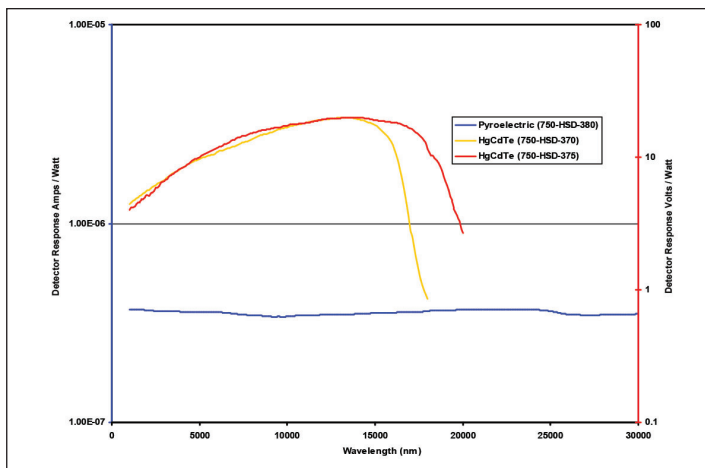


ULTRAVIOLET – VISIBLE – NEAR IR – MID IR			
750-HSD	TYPE ^{1/}	MODE ^{2/}	PEAK RESPONSIVITY
-304	Si	(AC)	0.6 A/W
-304	Ge	(AC)	0.5 A/W
-306	Si	(AC)	0.6 A/W
-306	Pbs	(AC)	2.0 X 10 ⁵ V/A
-308	Si	(AC)	0.6 A/W
-308	PbSe	(AC)	3.4 X 10 ³ V/W

NEAR IR – MID IR			
750-HSD	TYPE ^{1/}	MODE ^{2/}	PEAK RESPONSIVITY
-340	PbS	(AC)	5.0 X 10 ⁵ V/W
-350	PbSe	(AC)	4.8 X 10 ³ V/W
-360	InSb	(AC)	1.3 A/W

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MID IR – FAR IR			
750-HSD	TYPE ^{1/}	MODE ^{2/}	PEAK RESPONSIVITY
-370	HgCdTe	(AC)	≈ 20 V/W
-375	HgCdTe	(AC)	≈ 20 V/W
-380	Pyroelectric	(AC)	3.2 X 10 ⁻⁷ A/W

MODEL NO.	DETECTOR	MODE	WAVELENGTH RANGE (μm)	PEAK WAVELENGTH (μm)	ACTIVE AREA	TEMPERATURE (°C)	NEP (WATTS) ^{1/}
750-HSD-300	Si ^{3/}	(AC)	0.2 to 1.1	0.96	1 x 1 cm	Ambient	2 x 10 ⁻¹⁴
750-HSD-301	Si ^{3/}	(DC)	0.2 to 1.1	0.96	1 x 1 cm	Ambient	3 x 10 ⁻¹⁵
750-HSD-304 Two Color	Si Ge	(AC)	.25 to 1.1 1.05 to 1.8	0.8 1.8	5 mm dia. 2 mm	-20	1.5 x 10 ⁻¹⁴ 2 x 10 ⁻¹²
750-HSD-306 Two Color	Si Pbs	(AC)	.25 to 1.1 1.1 to 3.0	.8 2.6	5 mm dia. 3 x 3 mm	-20	1.5 x 10 ⁻¹⁴ 2.5 x 10 ⁻¹²
750-HSD-308 Two Color	Si PbSe	(AC)	.25 to 1.1 1.1 to 5.5	.8 4.3	5 mm dia. 3 x 3 mm	-20	1.5 x 10 ⁻¹⁴ 6 x 10 ⁻¹¹
750-HSD-310	PMT (S-20) ^{3/}	(AC)	0.19 to 0.82	0.40	24 x 8 mm	Ambient	5.5 x 10 ⁻¹⁶
750-HSD-311	PMT (S-20) ^{3/}	(DC)	0.19 to 0.82	0.40	24 x 8 mm	Ambient	8 x 10 ⁻¹⁶
750-HSD-312	PMT (Solar Blind) ^{3/}	(AC)	0.16 to 0.32	0.20	24 x 8 mm	Ambient	9 x 10 ⁻¹⁶
750-HSD-313	PMT (Solar Blind) ^{3/}	(DC)	0.16 to 0.32	0.20	24 x 8 mm	Ambient	1 x 10 ⁻¹⁵
750-HSD-318	PMT (GaAs) ^{3/}	(AC)	0.18 to 0.93	0.8	12 x 3 mm	-10	1.5 x 10 ⁻¹⁶
750-HSD-319	PMT (GaAs) ^{3/}	(DC)	0.18 to 0.93	0.8	12 x 3 mm	-10	1.5 x 10 ⁻¹⁶
750-HSD-320	Ge ^{3/}	(AC)	0.8 to 1.8	1.5	5 mm dia.	-20	1 x 10 ⁻¹²
750-HSD-321	Ge ^{3/}	(DC)	0.8 to 1.8	1.5	5 mm dia.	-20	7.2 x 10 ⁻¹³
750-HSD-330	InGaAs ^{3/}	(AC)	0.8 to 1.7	1.58	3 mm dia.	-20	1.5 x 10 ⁻¹³
750-HSD-331	InGaAs ^{3/}	(DC)	0.8 to 1.7	1.58	3 mm dia.	-20	1 x 10 ⁻¹³
750-HSD-340	PbS	(AC)	1.0 to 3.2	2.6	3 x 3 mm	-20	1 x 10 ⁻¹²
750-HSD-350	PbSe	(AC)	1.0 to 5.5	4.3	3 x 3 mm	-20	4 x 10 ⁻¹¹
750-HSD-360	InSb ^{2/}	(AC)	1.0 to 5.5	4.9	3 mm dia.	-196	2 x 10 ⁻¹²
750-HSD-370	HgCdTe	(AC)	1.0 to 15	≈12	2 x 2 mm	-196	8 x 10 ⁻¹¹
750-HSD-375	HgCdTe	(AC)	1.0 to 21	≈16	2 x 2 mm	-196	8 x 10 ⁻¹¹
750-HSD-380	Pyroelectric	(AC)	1.0 to 30	N/A	5 mm dia.	Ambient	1.5 x 10 ⁻⁸

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