STAR TECH INSTRUMENTS

VHR-XR-Series

Fast Response Power and Energy Probes for wavelengths from 1 nm to 410 nm

The VHR and XHR energy probes cover a wide range of wavelengths and powers in the ultraviolet. Clear aperture sizes are from 16 to 50 mm with damage thresholds to 5W/ cm^2. The probes are calibrated to NIST traceable standards, have an excellent linearity and are not affected by exposure to UV energy even after a billion pulses. Probe housings are available in either anodized aluminum or stainless steel for vacuum or clean room applications.

Features:

- High throughput for power/energy monitoring
- Polarization insensitive
- Broad Wavelength Range[1]
- High Responsivity
- Wide Flat Field of View
- High Damage Threshold
- No damage after a Billion pulses!
- OEM and custom configuration options available

[1]*Model dependent*

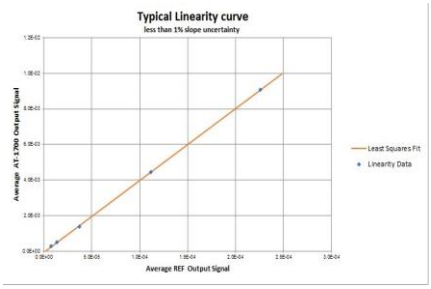
VHR-C38 stainless steel

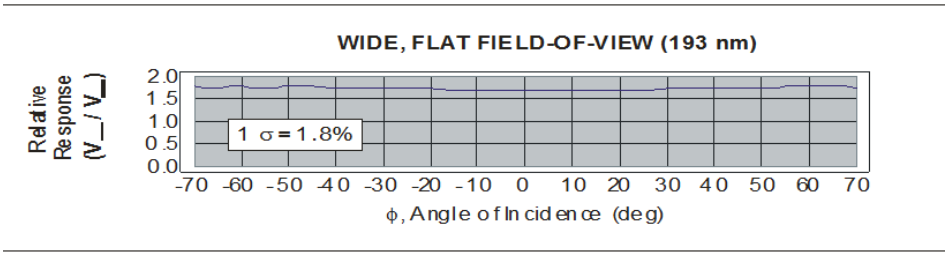
VHR-C38 Anodized Al

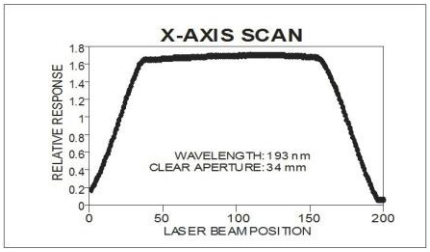
Specifications:

Wavelength Range:	1 - 410 nm
Clear Aperture:	16 - 50 nm^2
Pulse damage threshold:	0.5 J/ cm2
CW damage threshold:	5W/cm2
Responsivity:	to 1MV/J
I/O deviation from linearity:	< 1%
Rise time (model dependent):	10 µsec- 1 msec
Fall time (model dependent):	~6 µsec
Responsivity variation over full aperture:	< 5%
Field of View:	-70 to 70 deg.
Signal output:	150 mV (BNC)

[2] *Other aperture sizes available on request*







光技術をサポートする
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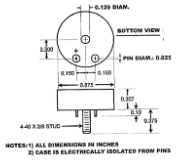
Crystal Options

Crystal	Primary Application	Useful Spectral Band (nm)	Relative response			Saturation mJ/cm^2			Decay time µsec	Max Rep Rate kHz for single pulse profiles
			193 nm	248 nm	308 nm	193 nm	248 nm	308 nm		
C	193 nm	110 to 225	22	0.17	0.03	400	X	x	3-5	20-30
G	Wide λ, high sensitivity	1 to 400	480	480	112	10	10	50	0.5	200
P	High fluence, fast	110 to 350	48	15	1	30	30	50	5	20
R	Wide λ,high fluence, slow	110 to 532	100	8	0.18	50	400	400	3,000	0.03

193 nm Responsivity by model (V/J) at 193 nm

Probe Type	Crystal Type			
	C	G	P	R
BEM	22	480	48	100
VHR	2500	50000	2000	2500
MM	500	10000	400	500

VHR Probes



XHR Probes

Energy/ Power Monitor Models/ Specifications

Probe Model	Clear Aperture (mm)	Pulse Damage Threshold	Diam. (mm)	Thickness	Interface COAX/ BNC	Interface Other	Mounting
VHR-25	25	500 mJ/cm^2	57.2	19	Male		8-32 THD
VHR-38	38		69.9	19	Male		8-32 THD
VHR-50	50		82.6	19	Male		8-32 THD
VHR-89*	89		120.8	19	Male		8-32 THD
XR-10	10		16	8.3	Male		
XR-16	16		32.9		Male		
XR-20	20		28.6	6.9	Male		
XR-25	25		32.9	6.9	Male		
XHR-16 mini-probe	16		22.2	7.8		Pin out	4-40 STUD
XR-16R-IO*	16		22.2			SMA (F)	Case OD
BEM-25	25		63.5	6	Female		1/2" post
BEM-38	38		76.2	6	Female		1/2" post
BEM-50	50		85.9	6	Female		1/2" post

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