## **Optomechanics**

## **CHAPTERS**

### **Lab Supplies**

### **SECTIONS**

**Optics Supplies** 

**Fiber Supplies** 

**Lab Tools** 

#### Safety and Blackout

Screws, Nuts, and Bolts

19" Rack Hardware

Storage

# Viewing Cards

- Detects Beams as Low as 1 nW/cm<sup>2</sup>
- Minimal Optical Charging
- Free of Hazardous Reflections
- Cards for the UV, Visible, and IR

Thorlabs offers viewing cards for UV, visible, and IR beams. As UV and IR light are invisible to the human eye, these cards emit a visible spot at the location of the beam. They are commonly used for beam alignment and when collimating a laser beam.

## VRC1, VRC2, and VRC4

The cards are made from a durable plastic with a photosensitive region adhered to the front surface of the card. The active region on the VRC1 and VRC4 is fast charging; hence, emission is persistent even when used in CW applications in a darkened room. The 1.25" x 2.1" (31.8 mm x 54 mm) detection region on these cards extends all the way to the edge of the card in order to facilitate its use during alignment procedures.

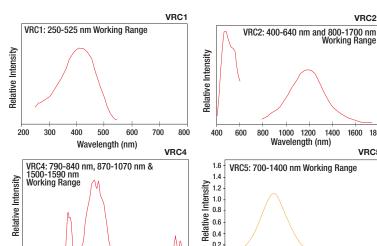
When the card is used in a darkened room with a sufficiently bright source, the fluorescence from the activated photosensitive region can be seen through the back of the card. This is especially useful for aligning the overlap of two beams. The VRC2 is similar to the VRC4 and VRC1 except that it requires the user to charge the card with light from a visible light source.

# ORLANS VRC4 VRC5 VRC1 VRC2

VRC2

1600 1800

VRC5



900 1000 1100 1200 1300 1400 1500 1600

Wavelength (nm)

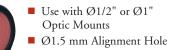
### VRC5

Our VRC5 IR viewing card has a photosensitive region sandwiched between two plastic layers. The card has a smaller detection region than our other viewing cards but offers a broader working range.

500 600 700 800

ITEM #	\$		£		€		RMB		WORKING RANGE (nm)	ACTIVE AREA
VRC1	\$	73.00	£	52.56	€	63,51	¥	581.81	250 - 540 nm	1.25" x 2.1" ( 31.8 mm x 54 mm)
VRC2	\$	73.00	£	52.56	€	63,51	¥	581.81	400 - 640 nm, 800 - 1700 nm	1.25" x 2.1" ( 31.8 mm x 54 mm)
VRC4	\$	73.00	£	52.56	€	63,51	¥	581.81	790 - 840 nm, 870 - 1070 nm, 1500 - 1590 nm	1.25" x 2.1" ( 31.8 mm x 54 mm)
VRC5	\$	114.00	£	82.08	€	99,18	¥	908.58	700 - 1400 nm	0.75" x 1.5" ( 19.1 mm x 38.1 mm)

# **IR Alignment Disks**



VRC2D1 1" Outer

Diameter



Diameter

These IR alignment disks are ideally used as drop-in tools to simplify active alignment of IR and visible setups. Available in Ø1/2" or Ø1" sizes, these drop-in disks align beams to the optical axis of our mounts or lens tubes. They are made of slow-fading phosphor that is active in the IR. See graphs above for absorption spectrums.

0.6 0.7 0.8 0.9 1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2

ITEM #	SIZE	\$		£		E		RMB		DESCRIPTION
VRC2D05	Ø1/2"	\$	21.00	£	15.12	€	18,27	¥	167.37	Ø1/2" IR Alignment Disk, Working Ranges: 400 - 640 nm and 800 - 1700 nm
VRC2D1	Ø1"	\$	32.50	£	23.40	€	28,28	¥	259.03	Ø1" IR Alignment Disk, Working Ranges: 400 - 640 nm and 800 - 1700 nm
VRC4D05	Ø1/2"	\$	21.00	£	15.12	€	18,27	¥	167.37	Ø1/2" Enhanced Alignment Disk, Working Ranges: 790 - 840 nm, 870 - 1070 nm, and 1500 - 1590 nm
VRC4D1	Ø1"	\$	32.50	£	23.40	€	28,28	¥	259.03	Ø1" Enhanced Alignment Disk, Working Ranges: 790 - 840 nm, 870 - 1070 nm, and 1500 - 1590 nm

# **Threaded IR Viewing/Alignment Disk**

VRC2D1 Shown with LMR1 and Post (Sold Separately)

- Made with Slow-Fading Phosphor
- RMS or SM1 Threaded
- 400 640 nm and 800 1700 nm Absorption Bands, see VRC2 Graph Above



ITEM #	CA*	CA* \$		£		€		RMB		DESCRIPTION
VRC2RMS	Ø0.70"	\$	80.00	£	57.60	€	69,60	¥	637.60	RMS Alignment Disk, Working Ranges: 400 - 640 nm and 800 - 1700 nm
VRC2SM1	Ø0.79"	\$	76.50	£	55.08	€	66,56	¥	609.71	SM1 Alignment Disk, Working Ranges: 400 - 640 nm and 800 - 1700 nm

\*Clear Aperture

