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TECHNOLOGY GROUP

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PHOTONIC PRODUCTS

BY



9639 Dr. Perry Road, Suite 210
Ijamsville, Maryland 21754
http://www.lumitek.com

LUMITEK
PHOTONIC PRODUCTS

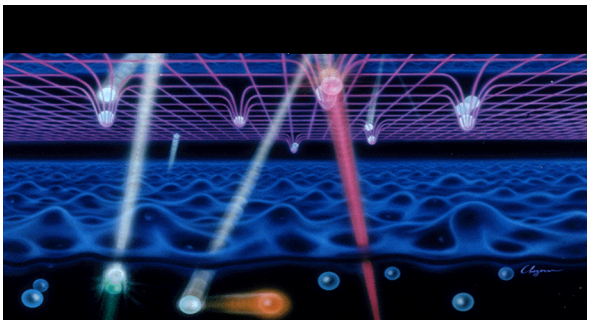
Model No. Q-32-R

INFRARED SENSOR

LUMITEK® International, Inc.
9639 Dr. Perry Road
Ijamsville, MD 21754

Phone: (301) 831-1001 / Fax: (301) 831-8221

.....Artist's Concept of Electron Trapping.....



IR Sensor Cards by LUMITEK International work on a principle known as "Electron Trapping" where phosphor-based compounds are employed to absorb and "trap" incoming light energy from a short wavelength, and release that stored light in the form of visible light upon stimulation from a longer IR wavelength. The visible result is a localized glow, which is relative in intensity to the amount of stored light and IR power levels exciting the active area.

Exposure of LUMITEK's up-converting materials to IR will produce a diffuse localized visible glow for detection and location of IR sources. These IR sensor screens provide a low-cost alternative to laser beam finders and beam profile instruments by providing the user with an instant visible pattern for determining beam location and approximate beam size. In addition, the high sensitivity of the IR sensor screens provides users of various IR sources and components (e.g., IR emitting diodes, optical fibers, etc.) an effective tool for determining the presence or absence of IR.

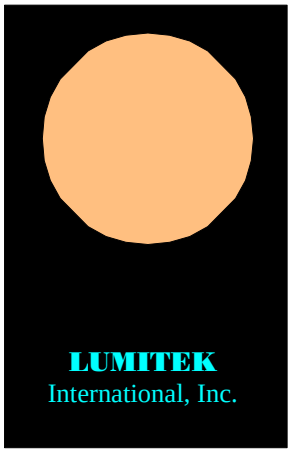
Use the chart below to determine the phosphor material which best suits your needs, or call LUMITEK International for help with your application.

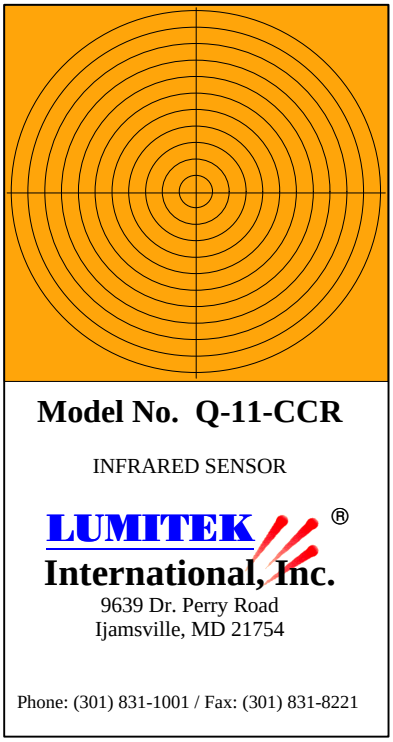
ET® PHOSPHOR	PEAK EMISSION WAVELENGTH (nm) / color	IR WAVELENGTH RANGE (μm)	APPROX. MIN IR INTENSITY (IN THE DARK)	APPROX. MIN IR INTENSITY (IN ROOM LIGHT)	PUMP WAVELENGTH	RESOLUTION (TYPICAL)
Q-11	625 / orange	0.7 - 1.4	12μW/cm^2	500μW/cm^2	visible....UV	3 Lp/mm
Q-16	485 / blue-green	0.7 - 1.4	10μW/cm^2	500μW/cm^2	visible...UV	3 Lp/mm
Q-32	650 / red	0.8 - 1.7	8μW/cm^2	500μW/cm^2	visible...UV	3 Lp/mm
Q-42	640 / deep orange	0.7 - 1.6	3μW/cm^2	100μW/cm^2	visible...UV	3 Lp/mm
F-16 (ceramic only)	640 / deep orange	10.6	100mW/cm^2	500mW/cm^2	visible...UV	3 Lp/mm
L-IR *NEW	550 / green	0.9-1.1	NA	NA	Not Required	NA

After choosing the appropriate Phosphor material, select the LUMITEK product which best suits your application from the following pages -------

HIGH RESOLUTION SENSOR SCREENS
(CF16-R, CQ42-R, CQ16-R)

For use with IR laser sources (ND-YAG & CO_2) that would burn through the standard sensor card. These screens measure 2.5" x 4" and have an active phosphor area of 2" diameter. For CO_2 lasers use the thermally activated model CF-16. This sensor needs about 1 watt/cm^2 or 1 to 2°C increase in temperature where IR impingement takes place compared to the surrounding phosphor. A long wave UV lamp may be needed to keep the phosphor emitting. The CQ42-R is high temperature tolerant but only needs 1/4 to 1/2mw/cm^2 of IR impingement in daylight. In dim light it only needs about 20-30μw/cm^2 impingement.





** ***PHOSPHOR TYPE*** (42, 32, 11, L-IR, etc.)

TO PLACE AN ORDER:
Phone: (301) 831-1001 / 1-866-LUMITEK
Fax: (301) 831-8221

LASER BEAM ALIGNMENT SCREENS
(Q ** - CC or APT - R or T)

Three of the most popular phosphors are offered on a rigid polycarbonate substrate that is **c**" thick. The dimensions are 2" x 4" and come with either a concentric circle or x-y axis reticle pattern. All are available in transmissive or reflective mode. They can be clamped, drilled, bolted, or otherwise affixed to various fixtures for permanent installation. Both have measurement lines of 2mm increments. The spatial coordinate of an impinging IR signal is not only visible but measurable by use of the reticle pattern.

OPTICAL GLASS SENSOR SCREENS
Q** - IRSCR-27

Optically clear 27mm diameter glass with your choice of one of our phosphors which is adhered to one side of the glass substrate. IR radiation emitting from your laser or LED source will be visualized from either side of the sensor screen.

27mm coated Glass

LAMINATED IR SENSOR SCREENS

(Q- ** - R or T)

These laminated reflective or transmissive sensor screens are the most commonly used basic sensor products. The phosphor layer is laminated between clear plastic for a wide range of near-IR detection and imaging applications. They are available with all of our phosphor materials and measure 2.5" x 4" overall with a 2" x 2" active area. Other sizes available upon request.

ADHESIVE BACKED SENSOR SCREENS

ADQ** - 2"x2" or 4"x4"

Thin flexible screens may be cut into any desired configuration and bonded to most surfaces by peeling the protective back and pressing in place. The phosphors are coated on transparent Mylar with a membrane adhesive back. The sensor screen will have the greatest IR sensitivity when bonded to a reflective material but may be applied to transparent materials for viewing from both sides of the screen. All of our phosphors are available in this format. Custom sizes are available upon request.

UV SENSOR SCREENS

(U- 21 or 31 - R or T)

Unlike our up-converting phosphors, these materials down-convert UV to a visible wavelength. They are available in sensitivities from below 200nm to 500nm. They have the same dimensions as our other cards but have no laminate over the phosphor layer so as not to inhibit the UV transmission. The sensor card measures 2.5" x 4" overall with a 2" x 2" active area. Other sizes available upon request.

SPECIALTY SENSOR PRODUCTS

Lumitek International can also provide sensor products such as private logo, business cards, or other custom sizes.

We can provide you with a product that is a like replacement for those people who had been purchasing their sensor cards from Kodak in the past.

Call our sales department for any specialty items that you may be interested in.

** ***PHOSPHOR TYPE*** (42, 32, 11, L-IR, etc.)

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VISA

MASTER CARD

ORDER LINE: 1-866-LUMITEK

KODAK EQUIVALENTS

KODAK#	KODAK DESCRIPTION	LUMITEK #
133 4093	¾" x ¾" screen size Reflectant IR Detection Stick	Q-11-R Stick ¾" x ¾"
827 8673	¾" x ¾" screen size Translucent IR Detection Stick	Q-11-T Stick ¾" x ¾"
824 2067	¾" x ¾" screen size Reflective & Translucent Stick	None
823 3124	¾" x ¾" screen size Reflectant IR Detection Card	Q-32-R Stick ¾" x ¾"
814 9718	2" x 2" screen size Reflectant IR Detection Card	Q-32-R 2" x 2"
808 5292	2" x 3" screen size Reflectant IR Detection Card	NONE
143 8522	4" x 5" screen size Reflectant IR Detection Card	Q-32-R45 4" x 5"
834 5282	¾" x ¾" screen size Reflectant IR Detection Card	Q-11-R Stick ¾" x ¾"
174 2048	2" x 2" screen size Reflectant IR Detection Card	Q-11-R 2" x 2"
192 1709	2" x 3" screen size Reflectant IR Detection Card	NONE
192 2558	4" x 5" screen size Reflectant IR Detection Card	Q-11-R45 4" x 5"
837 2997	8" x 10" screen size Reflectant IR Detection Card	Q-11-ADQ 8" x 10"
845 4027	¾" x ¾" screen size Translucent IR Detection Card	Q-11-T Stick ¾" x ¾"
183 4753	2" x 2" screen size Translucent IR Detection Card	Q-11-T 2" x 2"
845 7525	2" x 3" screen size Translucent IR Detection Card	NONE
826 2917	4" x 5" screen size Translucent IR Detection Card	Q-11-T45 4" x 5"
849 6754	8" x 10" screen size Translucent IR Detection Card	Q-11-ADQ 8" x 10"

LUMITEK International, Inc.

PROTECTIVE EYEWEAR

PRODUCT	WAVELENGTH (nm)	OPTICAL DENSITY	%Visual Light Transmission
Alexandrite / Diode 2 *Styles:* AXX-300, 700, 900, 30 AXX-31, 32, 39, 60 AXX-700 -CE Model	720-830 755 809	6+ 6+ 7+	58.7%
Argon / KTP *Styles:* ARG-300, 700, 900 ARG-30, 31, 32, 39, 60 ARG-700 -CE Model	190-449 450-532	5+ 6+	38.4%
IR Diode *Styles:* IRD-300, 700, 900 IRD-30, 31, 32, 39, 60	190-380 760-1725	5+ 2+	46.5%
Krypton (Red) / HeNe *Styles:* KRR-300, 700, 900 KRR-30, 31, 32, 39, 60	190-380 606-694	5+ 5+	17.6%
Nd:Yag (YG3) *Styles:* YG3-300, 700, 900 YG3-30, 32, 39, 60 YG3-900 -CE Model YAG-700-CE Model	190-380 1064 980-1070 1064	5+ 6+ 5+ 7+	20.2%
Nd:YAG Harmonics *Styles:* DBY-300, 700, 900 DBY-30, 31, 32, 39, 60 DBY-900-CE Model	190-534 1064	5+ 5+	10.6%
STYLE CODE:			
300-Wrap-Around 700-Medium Fitover 900-Large Fitover		#60-Softie Goggle #32-Adjustable Spectacle #30-Framed Wrap_Around #31-Medium Framed Fitover #39-Large Framed Fitover	

Contact our sales department for further information.
1-866-LUMITEK
Fax: 301-831-8221
sales@lumitek.com

LUMITEK International, Inc.

PHOTONIC PRODUCTS PRICE LIST

Active area	2"x2"	"Stick" ¾"x ¾"
Q-11-R	$130.00	$80.00
Q-11-T	$130.00	$80.00
Q-42-R	$130.00	$80.00
Q-42-T	$130.00	$80.00
Q-32-R	$130.00	$80.00
Q-32-T	$130.00	$80.00
Q-16-R	$130.00	$80.00
Q-16-T	$130.00	$80.00

Active area	4"x 5"
Q-42-R45	$520.00
Q-42-T45	$520.00

Active area	2"x 2"
U-21-R	$130.00
U-21-T	$130.00

Active area	2"x 2"
Q16-CCT	$240.00
Q16-CCR	$240.00
Q16-APT	$240.00
Q16-APR	$240.00
Q42-CCT	$240.00
Q42-CCR	$240.00
Q42-APT	$240.00
Q42-APR	$240.00
Q32-CCT	$240.00
Q32-CCR	$240.00
Q32-APT	$240.00
Q32-APR	$240.00

Active area	27mm
Q11-IRSCR-27	$190.00
Q16-IRSCR-27	$190.00
Q42-IRSCR-27	$190.00
Q32-IRSCR-27	$190.00

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*ADQ42-¾ (¾"x¾")	$80.00
*ADQ42-22 (2"x2")	$130.00
*ADQ42-44 (4"x4")	$510.00
*ADQ42-80 (8"x10")	$2,300.00

*This product is available in all phosphor material

Active area2" dia.

CF16-R	$660.00
CQ42-R	$570.00
CQ16-R	$570.00

PRICES ARE IN U.S. DOLLARS

PRICES ARE FOB LUMITEK FACTORY
IN IJAMSVILLE, MARYLAND

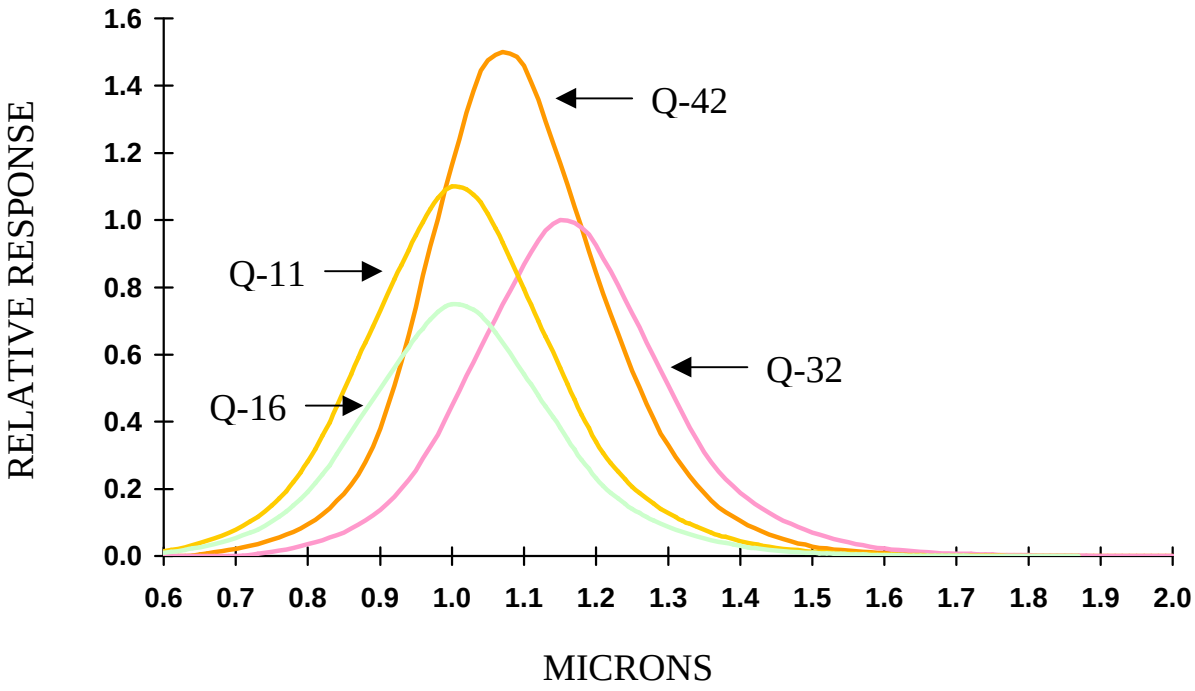
PRICES EFFECTIVE JULY, 1999 AND
SUBJECT TO CHANGE WITHOUT NOTICE

WE ACCEPT MATERCARD, VISA, AND
COMPANY PURCHASE ORDERS WITH
APPROVED CREDIT.

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FAX: (301) 831-8221
Toll Free: (866) LUMITEK

info@lumitek.com
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PHOSPHOR SENSITIVITY CHART



New Product

LUMITEK International, Inc.

Lumitek introduces a ***New*** *Infrared Sensor Product*

- Ideal for the users of YAG Lasers and IR LED's
- No optical pre-charging necessary
- Constant light output for steady light input

PHOSPHOR	PEAK EMISSION	IR WAVELENGTH
L-IR	Blue / Green	900 – 1100 nm

Model #L-IR-*

* AVAILABLE IN ALL OF OUR STANDARD MODEL CONFIGURATIONS

(R,T,CCR,APT,ETC…)

Contact our sales department for further information.
1-866-LUMITEK
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Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

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Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

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