Visual Instrumentation Corporation

High-Speed Imaging Technology

VideoStrobe II & VideoFlood II

High Intensity LED Light Sources

Model 200830
4 x 6 LED Array

VIC has continued its development of high intensity illumination products, as LED technology advances. This recognizes the need to support digital high-speed imaging cameras.

New generation energy efficient LED's feature very high illumination levels that rival tungsten-halogen lighting with virtually no heat in the beam. LED arrays are available in white, red, amber, cyan, green and blue to meet various spectral requirements. Both strobe and continuous models are available.

Benefits Include:

- ***Cool Illumination with High Efficiency***
- ***Long life, more than 10,000 hours***
- ***Ruggedized for Hi-g applications***
- ***Modeling light for camera set-up***
- ***Strobe and continuous controllers***
- ***Very low EMI & RFI***
- ***No UV radiation***
- ***Low voltage***

and more …

Model 200840
2 x 12 LED Array

Model 200810
2 x 2 LED Array

Model 200800
Single LED (shown in 6 LED configuration)

Model 200820
3 x 3 LED Array

Atlantic International Imaging, 7820 Enchanted Hills Blvd., Suite A-167, Rio Rancho, NM 87144
Phone: 505-771-8006 Cell: 505-264-2184 Fax: 505-771-8360 E-mail: Information@atlantic-international.org
Web Site: www.atlantic-international.org

Description

All LED arrays are designed for multiple applications including Hi-g. AC powered controllers are recommended for field, laboratory and other non-Hi-g applications. DC powered controllers are required in Hi-g environments. In addition, a modeling mode allows low-level illumination for camera set-up, which is 25% of full intensity. In this mode the LEDs can remain on for extended durations.

Each white LED produces peak luminous output of 90 lumens ±10%. A highly efficient reflector, designed specifically for these 3-watt LEDs, concentrates light output to about 400 lumens for each LED. Luminous efficiency is further enhanced by a selection process that matches each LED for: **1)** brightness **2)** color temperature and **3)** Voltage drop.

The result is a very smooth light beam. Color temperature is consistent, without hot-spots, rings or halos. The beam angles for various LED arrays are measured from center intensity to 50% which is one photographic f/stop. Data on specific beam angles are available on request.

Luminous efficiency is near 90% vs.10 to 15% for typical tungsten-halogen lights. A constant current drive circuit assures long LED life and reliability by maintaining a maximum and safe current level. To further enhance LED performance a series/parallel drive circuit is utilized, which lowers current consumption by 66% while maintaining maximum luminous output of each LED.

Specifications for all LED Models:

Color Temperature:	6000ºK, typical
Flash Rates:	Up to 5000Hz. limited by pulse width
Flash Duration:	Adjustable, 1 to 200 micro-seconds
Video Sync:	Accepts a 3.3 volt trigger pulse
Power:	*See Control Modules for details*

Model 200830 4 x 6 LED Array

Number of LEDs:	24-white, high-brightness with 10°reflectors
Luminous output:	9,600 total Lumens
Size:	6.0″ W x 4.5″ H x 2.25″ D (152 x 114 x 57mm)
Weight:	1.9 pounds (0.86kg)
Mounting:	1/4"-20 & threaded holes, 6 locations; 3 bottom & 3 side
Current Draw:	8.0 amps, series-parallel circuits

Model 200840 2 x 12 LED Array

Number of LEDs:	24-white, high-brightness with 10° reflectors
Luminous output:	9,600 total Lumens
Size:	12.0" W x 2.375" H x 2.25" D (308 x 60x 57mm)
Weight:	1.8 pounds (0.82kg)
Mounting:	Five 1/4-20 threaded holes on base
Current Draw:	8.0 amps, series-parallel circuit

Model 200820 3 x 3 LED Array

Number of LEDs:	9-white, high-brightness with 10° reflectors
Luminous output:	9,600 total Lumens
Size:	.5" L x 3.0″ W x 3.00″ H (89 x 76 x 76mm)
Weight:	1.13 pounds (.51kg)
Mounting:	1/4"-20 threaded holes, 3 bottom locations
Current Draw:	3.0 amps, series-parallel circuit

Model 200810 2 x 2 LED Array

Number of LEDs:	4-white high-brightness with 10° reflectors
Luminous output:	9,600 total Lumens
Size:	2.32" L x 2.0" W x 2.0" H (59 x 50 x 50mm)
Weight:	6 ounces (170 grams)
Mounting:	1/4-20 threaded holes, 3 bottom locations
Current Draw:	2.0 amps, series-parallel circuit

Model 10424 Single LED

Number of LEDs:	1-white high-brightness with 7°reflector
Luminous output:	400 Total Lumens
	3.0" L x 1.38" Dia. (76 x 35mm)
Size:	2 ounces (57 grams)
Weight:	1/4"-20 threaded hole, 1 location
Mounting:	1 amp

Controllers

All LED arrays can be driven in stroboscopic or continuous mode. Strobe controllers accept external 3.3 volt sync pulses from cameras to trigger the LEDs to flash once per image frame.

AC controllers accept 100 to 240 volts, 50/60/Hz power. 28VDC powered controllers drive; 3 x 3, 4 x 6 and 2 x 12 LED arrays. 12 VDC powered controllers drive; single LEDs and 2 x 2 arrays.

Single LEDs are powered by a six channel controller that drive 1 to 6-LEDs. The beam of single LEDs can be superimposed to increase the light intensity when very high illumination is required. These small LEDs will fit in tight spaces and produce a beam spread of 1-inch or 25mm at a nominal distance of 12-inches (305mm).

Model 200970 AC floodlight controller. Drives one or two 3 x 3 model 200820 arrays.