LMS-XXX

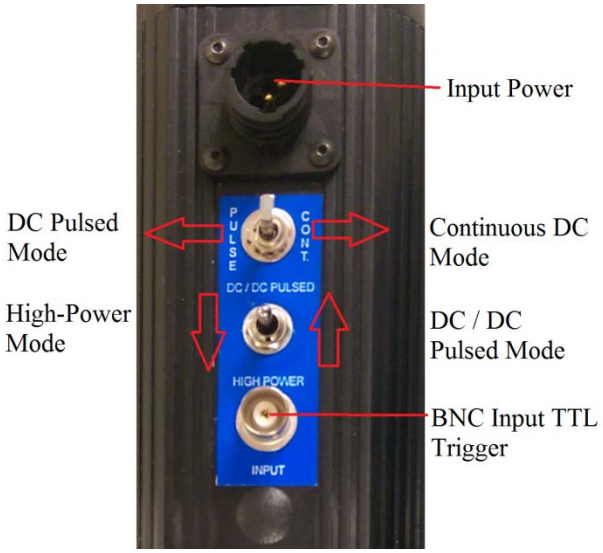
Operating Instructions

Innovative Scientific Solutions, Inc.

Schlieren and Shadowgraph LED Module Operating Instructions

The LMS-XXX consists of a lamp body and associated power supply (24 VDC). When the power supply is connected to the lamp body and energized, the fans in the lamp body should begin to operate. There should be no output at this time.

There are two toggle switches and a BNC connector on the control input side of the lamp body. One switch has a center OFF position. The small toggle switch adjacent to the BNC input connector is used to switch from high-power to DC continuous and pulsed DC output. The switch operates parallel to the body length.



When the toggle switch is positioned back towards the BNC input connector, the lamp is in high-power mode. In this position, an input is required to the BNC input connector.

This input should be a 5 VDC TTL level input. This will provide an output that is approximately four times the peak of the DC output (at the same pulse width) with a rise and fall time of less than 100 nanoseconds. When in this mode, there is a 5% duty factor limitation to protect the LED module. The lamp has a built-in safety circuit to automatically shut down the drive circuits if the duty factor limit is reached. To reset this circuit, you need to disconnect the BNC input and reduce the duty factor of the input pulse before re-connecting the input. When this switch is moved to the forward position, it enables the front toggle switch.

Innovative Scientific Solutions, Inc.
7610 McEwen Road, Dayton, OH 45459
Phone (937) 630-3012 Fax (937) 630-3015

email: issi-sales@innssi.com
web: www.psp-tsp.com

The front switch is used to switch between continuous DC and pulsed DC operation. This switch moves left and right with respect to the lamp body length. When the switch is positioned in the continuous DC mode (to the left when looking from the rear of the lamp), the lamp will produce a continuous output without any outside connections. To allow remote control of the lamp, place the switch to the right hand position. This position requires that a 5 VDC pulse be input to the BNC connector. There is no limit to the duty factor of this mode of operation. The rise time for this mode is less than 5 microseconds. The fall time is less than 75 microseconds.

Output power varies for different wavelength LEDs. It also varies depending on the driver mode (DC or high-power) the LED is being operated in.