

LIK-LMP Light Intensity Controller Kit



71582 TE cooled detector component of LIK-LMP Light Intensity Controller Kit shown here on the front and rear view.

The LIK-LMP is a light intensity controller kit designed for use with OPS Series Power Supplies. The kit maintains a constant light output from DC arc and Quartz Tungsten Halogen (QTH) lamps when mounted to the proper housing and connected to an OPS Model Power Supply. The necessary cables and adapters for electrical and mechanical compatibility with the OPS Series Power Supply and Research or Q Series Lamp Housings are included with the LIK-LMP. The LIK-LMP is also compatible with the previous generation 68945, 68950, and 68951 Digital Light Intensity Controllers.

WHAT'S INCLUDED IN THE LIK-LMP

Part Number	Description
71582	TE Cooled Si Detector Head
70062	Cable for temperature control of 71582 TE cooled detector head to OPS Series Power Supply
70018	Low noise BNC cable, 6 ft. length
68952	Mounting Adapter for fixing 71582 detector head to Research Lamp Housing
68954	Mounting Adapter for fixing 71582 detector head to Q Series Lamp Housing

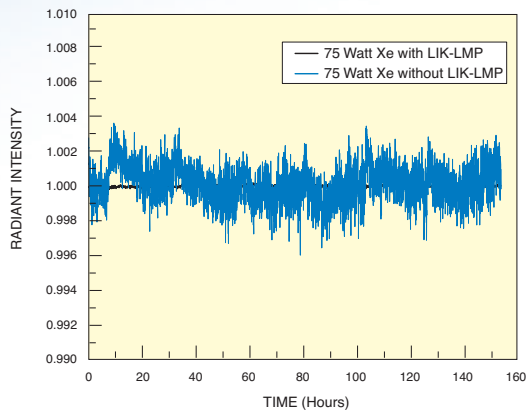
- TE cooled Si detector provides lamp output feedback to power supply
- For use with OPS Series Power Supplies (necessary cables included)
- Direct mounting to Research Lamp and Series Q Lamp Housings available (necessary flanges included)
- Ensures stable long term output from DC arc and quartz tungsten halogen lamps

DO I NEED A LIGHT INTENSITY CONTROLLER?

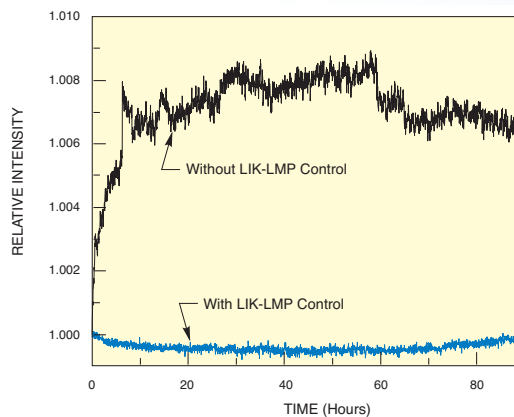
Oriel's power supplies are highly regulated, capable of operating DC Arc and Quartz Tungsten Halogen (QTH) lamps at constant current or power, even if the line voltage changes greatly. Even when a lamp is operated with constant current, the light output varies with age, filament or electrode erosion, gas absorption, and particularly for mercury arc lamps, ambient temperature. Both the total power output and monochromatic light power of spectral lines from a mercury lamp change with temperature. This causes variations in the output power of the lamp with time and can even cause pronounced frequency dependence. Even relatively simple QTH lamps exhibit output variations with continued use, as evaporation and halogen cycle redistribution of tungsten constantly change the microstructure of the filament.

The LIK-LMP corrects for these lamp output changes, maintaining a constant, long term output, from the lamp. The pictures on the next page show the marked improvement in output stability of an arc lamp and QTH lamp when a LIK-LMP is used.

LIK-LMP LIGHT INTENSITY CONTROLLER KIT



Intensity of arc lamp with and without LIK-LMP feedback



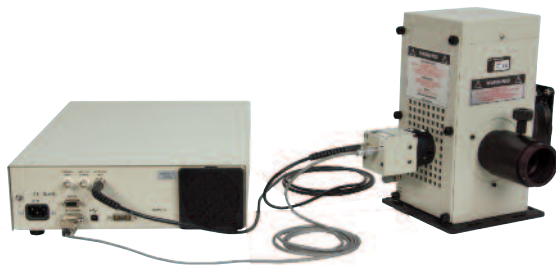
Intensity of QTH lamp with and without LIK-LMP feedback.

HOW DOES IT WORK?

The LIK-LMP utilizes a TE cooled silicon detector as its light sensing head. When used with the OPS-A Series Arc Lamp Power Supplies or OPS-Q Series Power Supplies this detector monitors light output from the DC Arc or QTH light source. Constant feedback of the light output allows the OPS Series Power Supply to determine how much power/current should be supplied to the light source in order to keep its output intensity constant as the light source ages. Using the cables supplied with the LIK-LMP for interface with the OPS Series Power Supply, the temperature of the Si detector is monitored and the current supplied to the TE cooler is controlled as well. This stabilizes the temperature of the Si detector, creating consistent detector feedback independent of ambient temperature variations.

MOUNTING

Also included in the LIK-LMP are the 68952 and 68954 mounting flanges for coupling to a Research Lamp Housing and Q Series Lamp Housing, respectively. These mounting flanges conveniently couple the TE cooled detector to the lamp housing for optimum light collection.



The OPS Series Power Supplies have output connectors to relay the LIK-LMP detector's feedback into light intensity data and control and monitor the detector's temperature. The detector's feedback alerts the Power Supply to make necessary changes in power/current to keep light intensity constant as the lamp ages. The LIK-LMP includes the necessary 70062 and 70018 cables for connecting to an OPS Series Power Supply. The Research Lamp Housing shown in the picture is sold separately.

WORKS WITH THESE ORIEL® POWER SUPPLIES

Model	Description
OPS-Q250	45-250 W QTH Lamp Power Supply, Power, Current, and Intensity Control Modes, RS-232/USB control, CE and RoHS compliant
OPS-Q1000	600-1000 W QTH Lamp Power Supply, Power, Current, and Intensity Control Modes, RS-232/USB control, CE and RoHS compliant
OPS-A150	50-150 W DC Arc Lamp Power Supply, Power, Current, and Intensity Control Modes, RS-232/USB control, CE and RoHS compliant
OPS-A500	200-500 W DC Arc Lamp Power Supply, Power, Current, and Intensity Control Modes, RS-232/USB control, CE and RoHS compliant

Ordering Table

LIK-LMP	Light Intensity Controller kit for OPS Series Power Supplies and Research Lamp/Series Q Lamp Housings
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