



COMPLETE SYSTEM FOR  
WAVELENGTH SWITCHING

INTEGRAL SHUTTERING

INTEGRAL NEUTRAL DENSITY FILTERING

TWO OUTPUTS FOR MONITORING  
FILTER POSITION

TURBO BLANKING

STROBE-PULSED RING BUFFER CONTROL



## LAMBDA DG-4/DG-5 PLUS HIGH SPEED WAVELENGTH SWITCHER

The **Lambda DG-4/DG-5 PLUS** is a complete illumination system offering speed and versatility for experiments requiring rapid wavelength switching. New digital servo technology allows faster filter switching and 30% greater light output than the first generation **DG-4/DG-5**. The instrument retains all the advantages of interference filter based systems, yet eliminates the temporal constraints imposed by traditional filter changing devices like filter wheels. Switching between any two wavelengths is achieved in 0.5msec, allowing the user to perform real-time video imaging. The high switching speed of the **Lambda DG-4/DG-5 PLUS** facilitates the ability to follow fast changes in ion concentrations in dual wavelength ratio imaging applications and to monitor other concomitant changes in the studied system at additional wavelengths.

Narrow bandpass systems, such as single cavity interference filters, grating monochromators, and A.O. modulators, pass unwanted harmonics

of the desired wavelength. Also, with variable wavelength devices, it is not always possible to obtain sufficient blocking of out-of-band wavelengths. Modern interference filters, as used in the **Lambda DG-4/DG-5 PLUS**, do not pass harmonics and have integral blocking characteristics 1000 times better than typical monochromator systems. For the same full width at half maximum (FWHM), interference filters have a narrower spectral bandpass than monochromators due to the absence of the slit function.

The dual galvanometer design of the **Lambda DG-4/DG-5 PLUS** allows tuning of the relative intensities at each wavelength. This adjustment is difficult to obtain in variable wavelength devices with a single optical path. Unlike monochromators and other wavelength selective systems, the **Lambda DG-4/DG-5 PLUS** can be used as a source of white light when required.

### DG-4/DG-5 PLUS

#### BASIC SYSTEM WITH IMPROVED GALVOS

Includes main unit with 300W pre-aligned xenon arc bulb, 4 slide-in filter holders (25mm), 1 neutral density filter holder (25mm), power cord, serial and parallel cables, liquid light guide, spanner wrench, and manual. (DG-5 PLUS includes an additional 18mm and flat wrench. Three positions are 18mm, and two are 25mm in diameter).

#### DG-4PLUS/OF30

DG-4 PLUS with 300 Watt ozone-free bulb

#### DG-4PLUS/FS30

DG-4 PLUS with 300 Watt full spectrum bulb

#### DG-5PLUS/OF30

DG-5 PLUS with 300 Watt ozone-free bulb

#### DG-5PLUS/FS30

DG-5 PLUS with 300 Watt full spectrum bulb

### SPECIALTY DG-4

#### DG-4/T<sup>1</sup>

DG-4 with tungsten bulb

<sup>1</sup> Power supply is supplied by the customer.

**SUTTER INSTRUMENT**

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