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MODEL 39

HIGH CONTRAST OPTION
Data Sheet 730

HIGH CONTRAST CONFIGURATION FOR E-O MODULATION

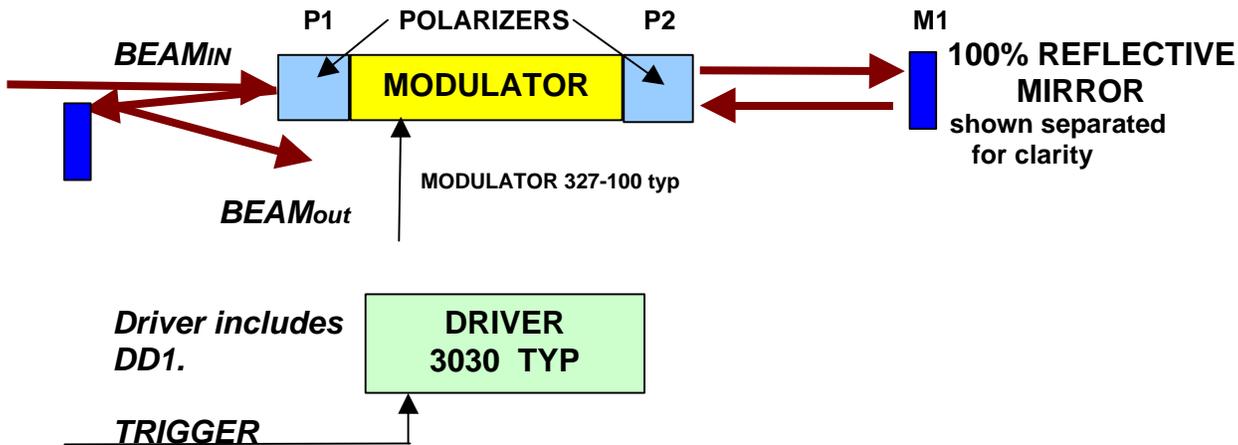
FEATURES:

- ◆ Attain contrast ratios 10,000 to 50,000:1
- ◆ Halfwave voltage are same as single pass mode
- ◆ High contrast ratios obtainable even for UV lines

GENERAL DESCRIPTION:

In the usage of an E-O modulator, contrast ratios of greater than 500:1 at 633nm can be routinely obtained. However, the contrast ratio is a function of wavelength. At 514nm, typically, the contrast ratio will be 250:1, while at 488nm it will be 200:1. If higher contrast ratios are required then it can be accomplished by the following supplied elements in the setup below.

- 2 pcs Model 19GLE polarizer
- One mirror, M1, on integral gimbals mount attached to polarizer, P2



The input beam is vertically polarized and transmits through the vertically oriented input polarizer. When a voltage is applied to extinguish the beam, a small residual component passes through the output crossed polarizer and retro-reflects back through the input optics. Since this component is horizontally polarized, it is rejected by the input polarizer almost completely. The degree of extinction is dependant on the angular deviation between the input beam and the useable reflected beam.