

## Plasma Panel Bar Graph Modules

Dual Linear Bar Graph with Drive Electronics  
Interface and DC/DC Converter



### FEATURES

- Low input voltage (only + 12 VDC required)
- Input voltage can be scaled for full scale indication from + 5 to + 30 VDC
- 1/2% resolution
- Glow blends into continuous but precisely controlled bar length
- Compact size
- Wide viewing angle (150°)
- Rugged design
- High brightness

The ABG-12205 consists of a 5 phase dual linear plasma bar graph display, driver circuitry and an interface circuit. A DC/DC converter is also included to develop the necessary panel voltage.

The display operates on the patented principle known as “glow transfer”. The display has 201 cathode elements per column, of which the first element in each column is a “reset” cathode. The remaining cathodes are connected in 5 phases where every 5th cathode is connected. The columns are scanned from the bottom to top by pulsing the reset cathode low, followed by sequentially pulsing each phase low until the top cathode is reached, at which time a new scan is started at the reset cathode. The anodes are energized starting at the time the reset code is energized until the desired display height is reached, at which time the anode is turned off for the balance of the scan time. The cathodes are refreshed at a 70 Hz rate so the scan appears to be flicker free.

The interface circuit uses a voltage ramp, derived from a D-A converter driven by a clock oscillator and level comparators to control the anode drivers. The unknown (input) signal is applied to one input of the comparator and the voltage ramp applied to the other input. When the ramp voltage coincides with the unknown signal, the anode driver is turned off, stopping the illumination of the bar graph column at that point on the scan.

The scaling adjustments are made by applying the maximum DC voltage to be measured (up to 30 volts) to the inputs and adjusting the right and left column trimmer resistors so that the columns are illuminated to full scale (The adjustments are factory set for a 5 volt full scale reading).

A common return is provided for each input and should be used to minimize noise that could cause the signal on the column to jitter.

### OPTICAL SPECIFICATIONS

**Viewing Area:** 0.79" [20.1mm] W x 3.95" [100.3mm] H.

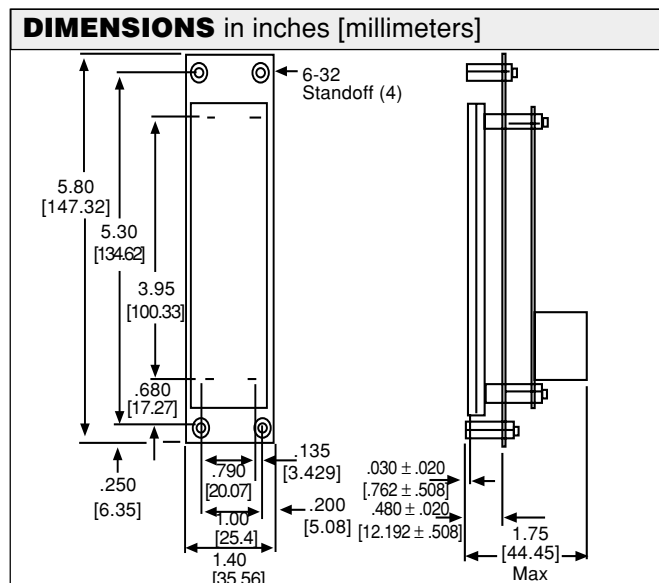
**Elements:** 201.

**Element Size:** 0.011" [0.28mm] x 0.100" [2.54mm] L.

**Element Pitch:** 0.020" [0.51mm].

**Luminance:** 70 foot lamberts.

STANDARD ELECTRICAL SPECIFICATIONS				
DESCRIPTION	MIN.	TYP.	MAX.	UNITS
Panel Supply Voltage	+ 11.4	+ 12.0	+ 12.6	V
Panel Supply Current	-	-	0.75	A
Input Signal	+ 5.0	-	+ 30.0	V
Input Impedance	10k	-	60k	Ohm



### ORDERING INFORMATION

#### DESCRIPTION

DESCRIPTION	PART NUMBER
Display and Drive Electronics .....	ABG-12205
Mating Connector Kit .....	280108-06
Non-Glare Filter (amber circular polarized) _ other filters available, contact factory .....	280109-07