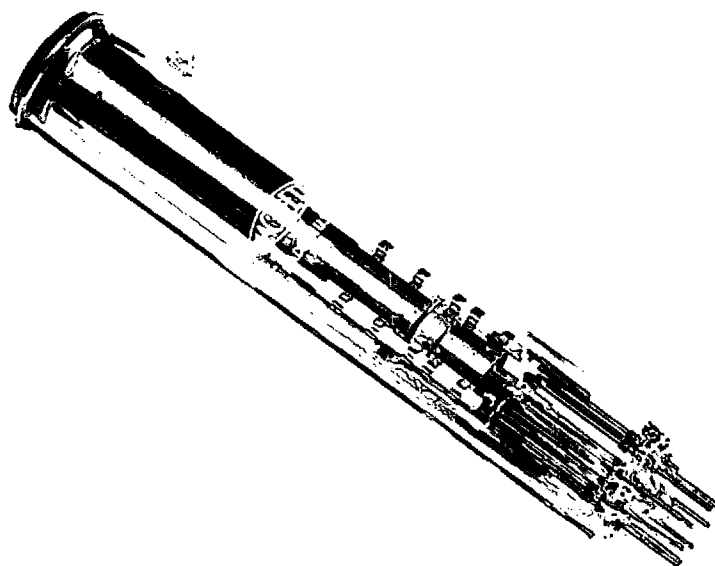




ML-7351

DESCRIPTION & RATINGS

DESCRIPTION

The **ML-7351** is a small television camera tube designed primarily for use at low light level in industrial applications with limited subject motion. Its resolution capability is about 500 lines. Using a photoconductive layer as its light sensitive element, the **ML-7351** has a sensitivity which permits televising scenes with about 0.1 foot-candles illumination on the faceplate of the tube. For average scenes, this corresponds

to approximately 5 foot-candles illumination on the scene when using an $f/2$ lens. The spectral response characteristic of the photoconductive layer exhibits a peak in the red and is somewhat dependent on dark current. The signal decay rate or lag of the **ML-7351** is approximately twice that of the **ML-6198**.

GENERAL CHARACTERISTICS

Heater, for Unipotential Cathode:		
Voltage (AC or DC)	6.3 $\pm$ 10%	volts
Current	0.6	ampere
Direct Interelectrode Capacitance:		
Signal Electrode to All Other Electrodes	4.5	$\mu\mu\text{f}$
Spectral Response	See Curve	
Photoconductive Layer:		
Maximum Useful Diagonal of Rectangular Image (4 x 3 Aspect Ratio)	0.62	inch
Orientation of Quality Rectangle — Proper orientation is obtained when the horizontal scan is essentially parallel to the plane passing through the tube axis and short index pin.		
Focusing Method	Magnetic	
Deflection Method	Magnetic	
Overall Length	6¼" $\pm$ ¼"	
Greatest Diameter, excluding side tip	1.125" $\pm$ 0.010"	
Maximum Radius, including side tip	0.800"	
Bulb	T-8	

TYPICAL OPERATING CONDITIONS

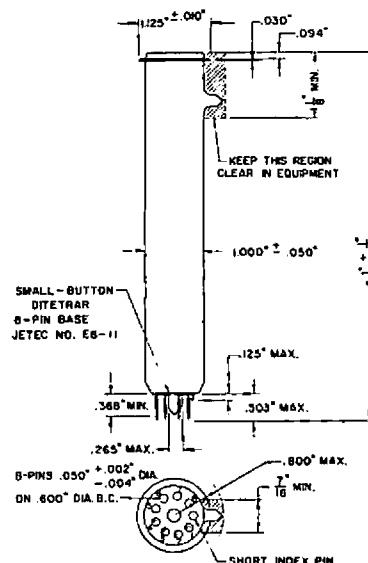
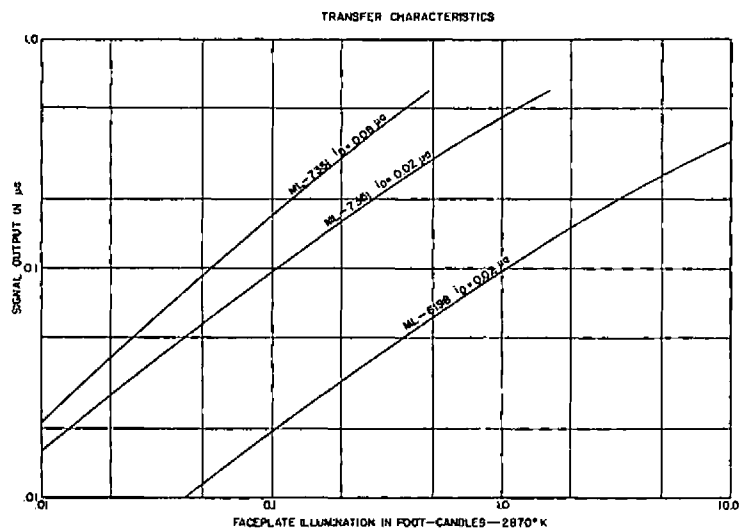
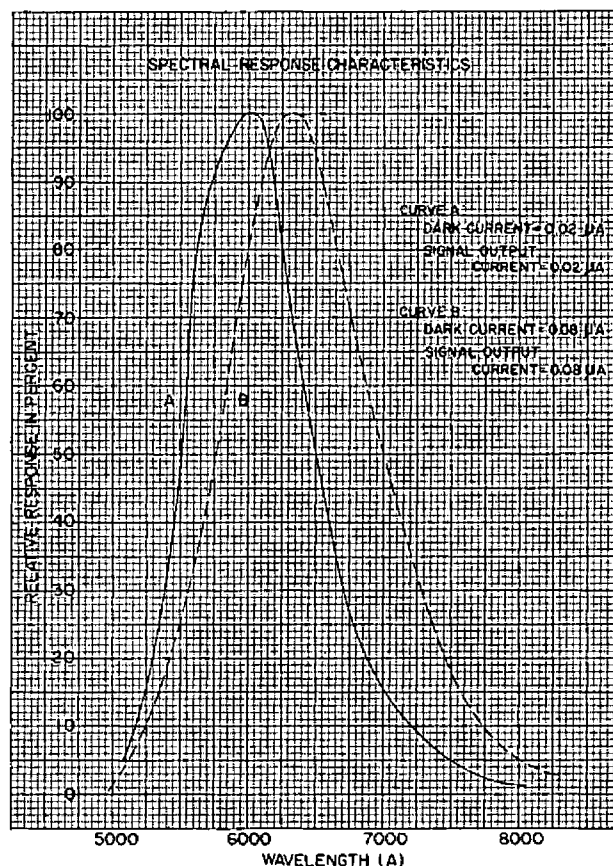
Typical Operation

Faceplate Illumination (Highlight)	0.3 to 0.7	ft-c
Signal-Electrode Voltage	10 to 25	volts
Maximum Rating	40	volts
Grid No. 4 (Decelerator) & Grid No. 3 (Beam Focus) Voltage	250† to 300	volts
Grid No. 2 (Accelerator) Voltage	300	volts
Grid No. 1 Voltage (For picture cutoff)‡	-45 to -100	volts
Highlight Signal-Output Current	0.2 to 0.4	μamps
Maximum Dark Current	0.08	μamp
Uniform 2870°K Tungsten Illumination on Tube Face to Produce Signal-Output Current of 0.1 to 0.2 μamp	0.1 to 0.3	ft-c
"Gamma" of Transfer Characteristic	0.6 to 0.7	
Visual Equipment Signal-to-Noise Ratio (Approx.)*	300:1	
Maximum Peak-to-Peak Blanking Voltage:		
When applied to grid No. 1	40	volts
When applied to cathode	10	volts
Field Strength at Center Focusing Device	40	gausses
Field Strength of Adjustable Alignment Coil	0 to 4	gausses

†Definition, focus uniformity, and picture quality decrease with decreasing grid No. 3 and grid No. 4 voltage. In general, grid No. 3 and grid No. 4 should not be operated below 250 volts.

‡With no blanking voltage on grid No. 1.

*Measured with a high-gain, low-noise, cascode-input amplifier having bandwidth of 5 Mc.



PIN NO.	ELEMENT
1	HEATER
2	GRID NO. 1
3	INTERNAL CONNECTION DO NOT USE
4	INTERNAL CONNECTION DO NOT USE
5	GRID NO. 2
6	GRIDS NO. 3 & NO. 4
7	CATHODE
8	HEATER
FLANGE	SIGNAL ELECTRODE
SHORT INDEX PIN	INTERNAL CONNECTION MAKE NO CONNECTION

MACHLETT LABORATORIES, INC.

SPRINGDALE MACHLETT CONNECTICUT

U. S. A.