LEADER



Checks Bottom Level and Magnitude of LCD Panel Flicker



• GENERAL

The LT 9213A greatly reduces the investment in capital equipment required to adjust and evaluate flicker in LCD and other display panels. Visual methods are difficult, non-repeatable and fatiguing to operators and spectrum analyzer methods are costly and require experienced personnel. Use of the LT 9213A saves space as well, and once set up, provides production speed with fast GO/NO GO judgements. A DC output proportional to the meter reading is provided as well as a TTL output of GO/NO GO finding. The optical sensor is provided

FEATURES

- Large Equipment Cost Savings as Opposed to Spectrum Ana-lyzer Methods
- Large Indicator Eliminates Operator Fatigue
- Amplitude Compressor Simplifies "Bottom" Adjustment
- Selectable Bandpass Filter Eliminates Noise and Interference and Adapts the Unit to a Wide Range of LCDs
- GO-NO GO Indicators and Judgement Speed Throughput
- **DC AGC for Relative Flicker Measurements**
- Aids in Evaluating Compliance with VESA 305-5
- Accommodates a Wide Range of Brightness (0.5 to 300 cd/m²)

• SPECIFICATIONS

System:

Indication of brightness variation Variable frequency bandpass filter provided to select flicker component

Functions:

- Input section Abnormal brightness (too bright, too dim) indicator, input level adjustor
- DC AGC normalizes brightness dispersion. Meter sensitivity adjustor
- Variable frequency bandpass filter provided to select flicker component
- Flicker indication compressor (COMPRESSION/ LINEAR, selectable)
- GO/ NO-GO judgment and output
- DC output in proportion to the meter
- indication Flicker waveform monitor output

Flicker Measurement Measurement Range:

0 to 30 %, 2 ranges (RESPONSE: LINEAR, SENSITIVITY: FIX)

Panel Brightness Range when a provide sensor is used.

LOW: HIGH:

Switchable LOW/HIGH by BRIGHTNESS RANGE SWITCH on rear panel. $0.5~cd/m^2$ to 50 cd/m^2 , include Brightness level adjustor 30 cd/m^2 to 300 cd/m^2 , include Brightness level adjustor

Brightness Range Indicator: Measurement Accuracy:

Sensitivity Adjustor: Meter Indication:

Built-In Filter

Variable Filter Type: Center Frequency: Selectivity:

Frequency Response (30 Hz ref.) 20 Hz to 60 Hz: 60 Hz to 150 Hz:

Fixed Filter Type:

Attenuation: **DC Output**

Output Signal: Output Voltage Output Resistance: Connecting cable length:

Accessory Sensor

Type: Model:

Connecting cable length: Monitor Output

- Output Signal:
- Output Voltage: **Output Resistance:**
- Connecting cable length: GO/ NO-GO Function
- Method: Setting: Indicator:
- Output:
- Connecting cable length: **Power Requirements:**

Environmental Conditions Operating Temperature Range: **Operating Humidity Range:** Spec-Guaranteed Temperature Range: Spec-Guaranteed Humidity Range: **Dimensions and Weight:**

Accessories:

The brightness is measured when the sensor is fully contacted to the LCD panel. Indicates abnormal brightness (too bright, too dim) ±10 % of full scale (LINEARITY: LINEAR, SENSITIVITY: FIX) 0.3 to 2 times (refer to FIX) Average responding

Single-resonance bandpass filter 20 Hz to 150 Hz, variable Q=3

*Typical attenuation characteristics: 20 dB at 60 Hz (20 Hz tuning frequency)

±0.5 dB ±1 dB

RC low-pass filter, 6 dB/oct -3 dB at 400 Hz

Proportion to meter indication 1 V±50 mV at full scale, into open 1 k Ω approx ≤ 10 m

Silicon photodiode S2281-01(manufactured by Hamamatsu Photonics K.K.) < 3 m

Flicker component normalized by DC AGC 0.1 Vp-p/% approx. 600 Ω approx ≤ 10 m

Preset on the meter Judgement value in preset mode LED (GO: Green, NO-GO: Red) TTL level, fun out: 1 GO: LO, NO-GO or not judged: HI ≤ 10 m 100 V/ 115 V/ 230 V ±10 %(250 V max.), 50/60 Hz 7 W MAX.

0 to 40 °C ≤ 80 % RH (without condensation) 10 to 35 °C \leq 13 s Bl

\leq 80 % RH (without condensation)	
132 (W) x 148 (H) x 250 (D) mm, 2.4 kg	
Sensor	1
BNC - BNC cable	1
Power cord	1
Instruction manual	1