

## RELIABILITY

The reliability of requirements of this device are listed in Table 1.

**Table 1. Reliability**

TEST ITEMS	TEST CONDITIONS	FAILURE JUDGEMENT CRITERIA	SAMPLES (n), DEFECTIVE (C)	NOTES
Temperature Cycling	One cycle -40°C (30 min.) to +70°C in 30 minutes, repeated 25 times	Initial $\times 0.8 > V_O$ $V_O > \text{Initial} \times 1.2$	n = 11, C = 0	1
High Temperature and High Humidity Storage	+40°C, 90% RH, 500h		n = 11, C = 0	1
High Temperature Storage	+70°C, 500h		n = 11, C = 0	1
Low Temperature Storage	-40°C, 500h		n = 11, C = 0	1
Operational Life (High Temperature)	+60°C, $V_{CC} = 5\text{ V}$ , 500h		n = 11, C = 0	1
Mechanical Shock	100 m/s <sup>2</sup> , 6.0 ms 3 times/ $\pm X$ , $\pm Y$ , $\pm Z$ direction		n = 6, C = 0	1
Variable Frequency Vibration	10-to-55-to-10 Hz in 1 minute Amplitude: 1.5 mm 2h in each X, Y, Z direction		n = 6, C = 0	1

### NOTES:

1. Test conditions are according to Electro-optical Characteristics, shown on page 2.
2. At completion of the test, allow device to remain at nominal room temperature and humidity (non-condensing) for two hours.
3. Confidence level: 90%, Lot Tolerance Percent Defect (LTPD): 20%/40%.

## MANUFACTURER'S INSPECTION

### Inspection Lot

Inspection shall be carried out per each delivery lot.

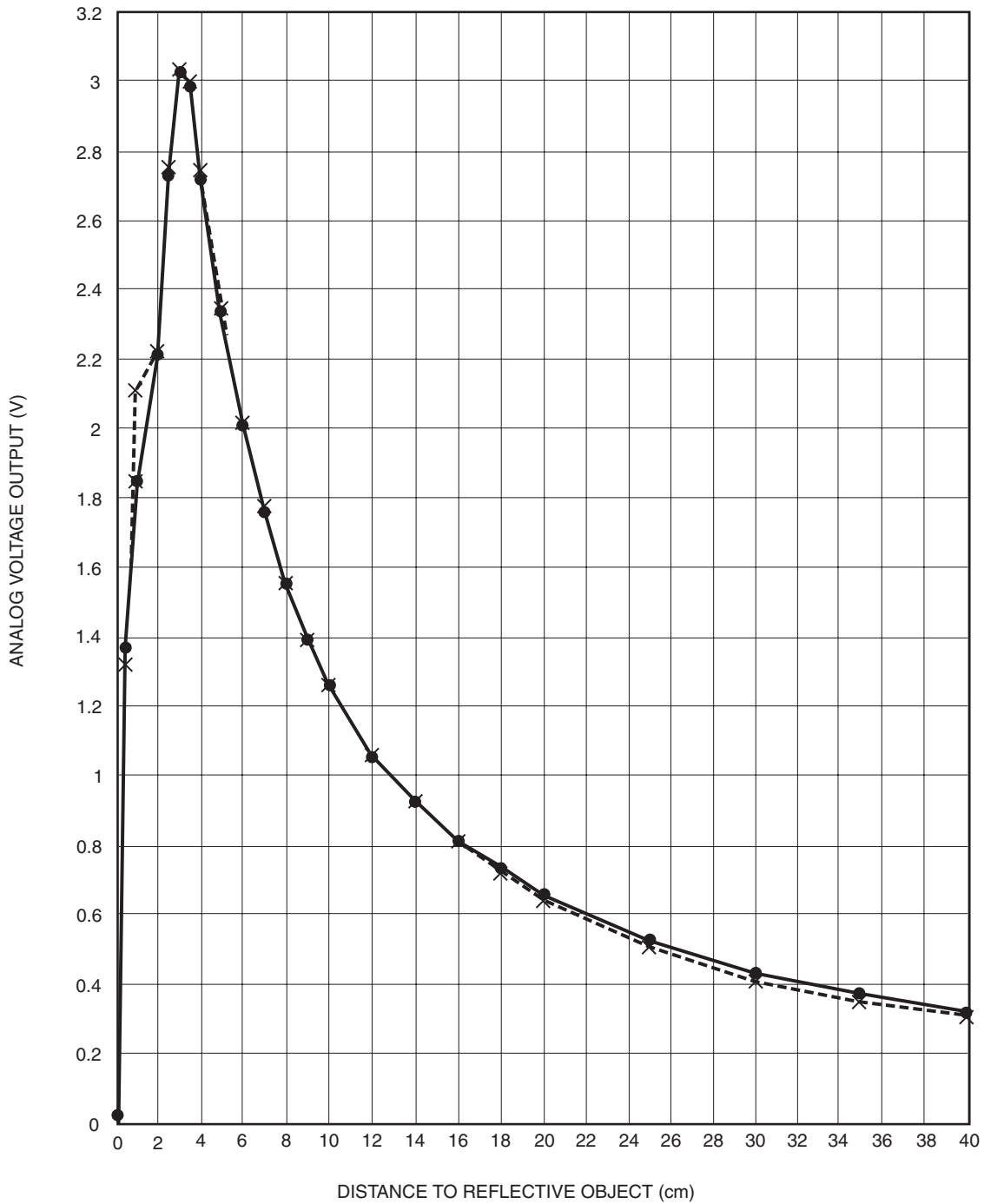
### Inspection Method

A single sampling plan, normal inspection level II based on ISO 2859 shall be adopted.

**Table 2. Quality Level**

DEFECT	INSPECTION ITEM/TEST METHOD	AQL (%)
Major Defect	Electro-optical characteristics defect	0.4
Minor Defect	Defect on appearance and dimension (split, chip, scratch, stain)*	1.0

**NOTE:** \*Any one of these that affects the Electro-optical Characteristics shall be considered a defect.



NOTES:

- White paper (90% Reflectance)
- x— Gray paper (18% Reflectance)

GP2D120-6

Figure 4. GP2D120 Example of Output Distance Characteristics