

Elastomer light-guide S

(1.4mm ϕ L-type)

Technical Data

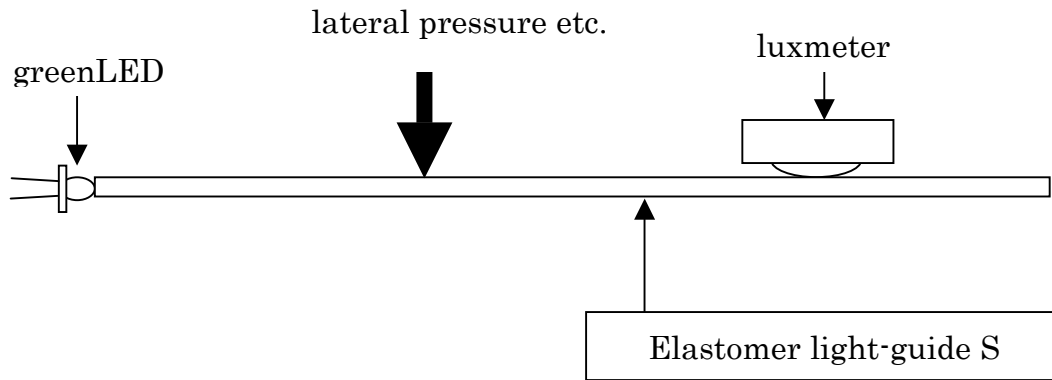
I Mechanical Properties

- I - 1 lateral pressure test
- I - 2 drop impact test
- I - 3 bend test
- I - 4 flexing test

II Physical Properties

- II - 1 heat test
- II - 2 cold resistant test
- II - 3 heat shock、 heat cycle
- II - 4 temperature-humidity cycle

Measurement

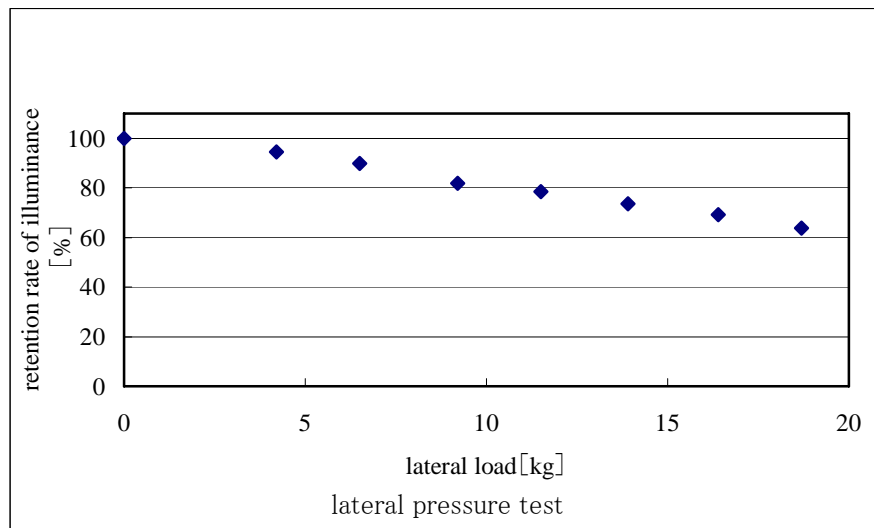


Intensities of lateral illuminance are measured with a greenLED and a luxmeter. The greenLED is connected to one end face of Elastomer light-guide S and the luxmeter is connected to the lateral surface of Elastomer light-guide S. Lateral pressure etc. are loaded between greenLED and luxmeter.

I Mechanical Properties

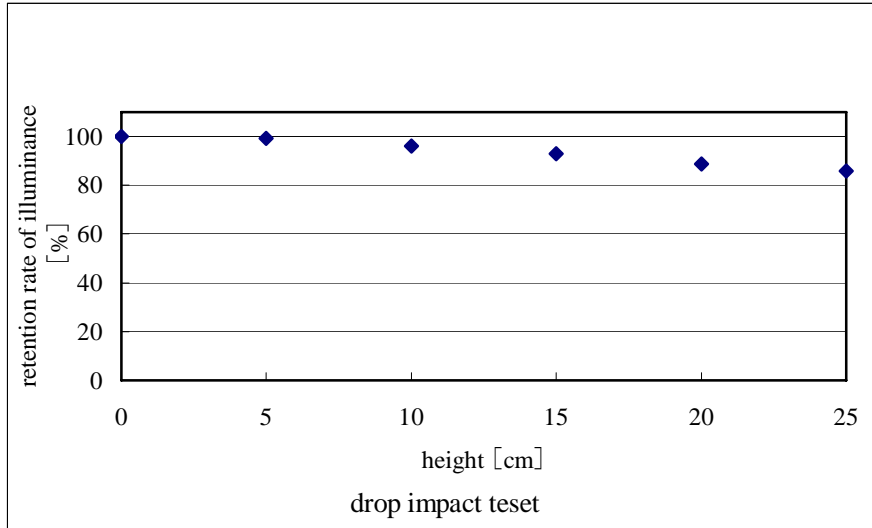
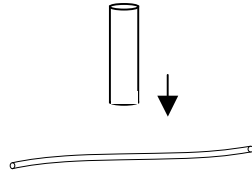
I – 1 lateral pressure test

Elastomer light-guide S was pressed with a metal plate of 30mm in diameter.



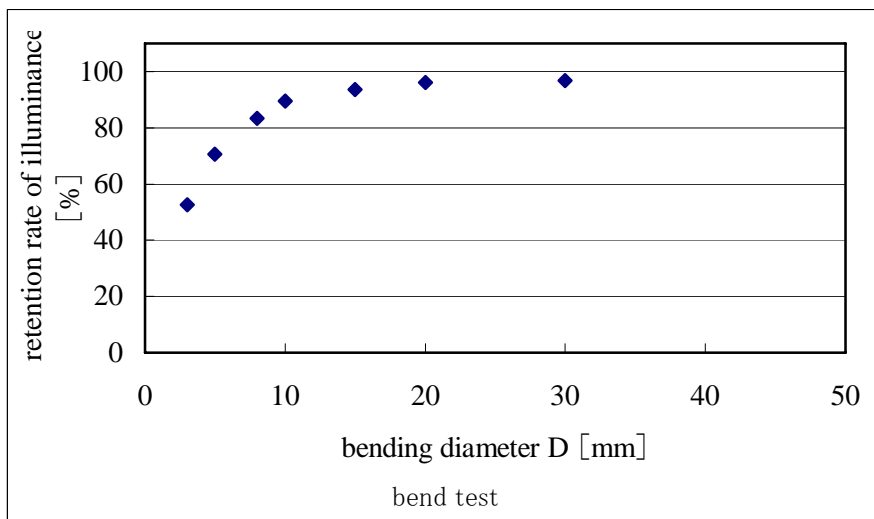
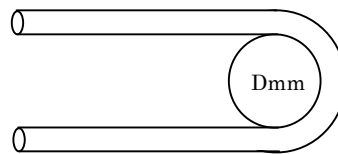
I – 2 drop impact test

Elastomer light-guide S was given an impact on with a cylinder dropped from height Hcm. The cylinder was 500g weight and 25mm diameter.



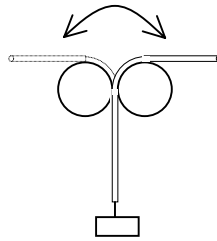
I – 3 bend test

Elastomer light-guide S was bent into a half circle alongside of a mandrel of Dmm in diameter.



I – 4 flexing test

Elastomer light-guide S hung 250g weight was bent repeatedly alongside of a cylinder of 10mm in diameter.



| The number of bending times | Retention rate of illuminance[%] |
|-----------------------------|----------------------------------|
| 10000 | 96.4 |

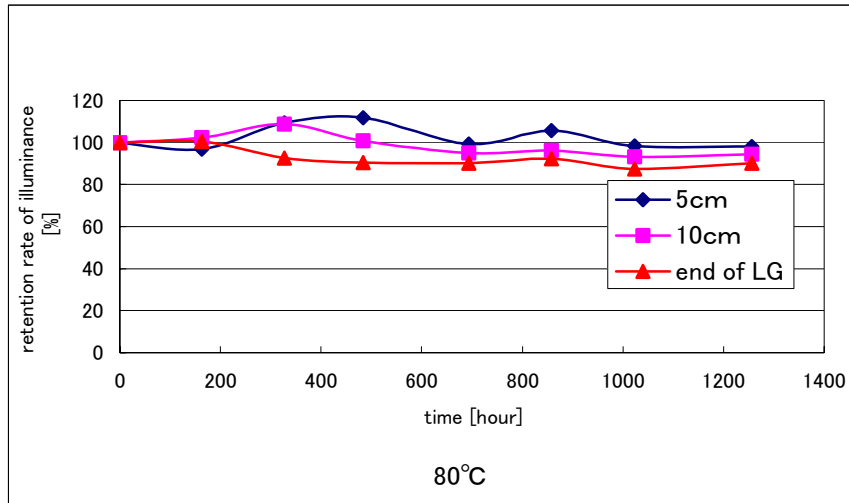
II Physical Properties

II – 1 heat test

Elastomer light-guide S was put into ovens of temperature 80°C , changes of illuminance intensities were measured at specified time intervals.

Sample length: 15cm

Measuring point: 5cm from LED, 10cm from LED and end of light-guide

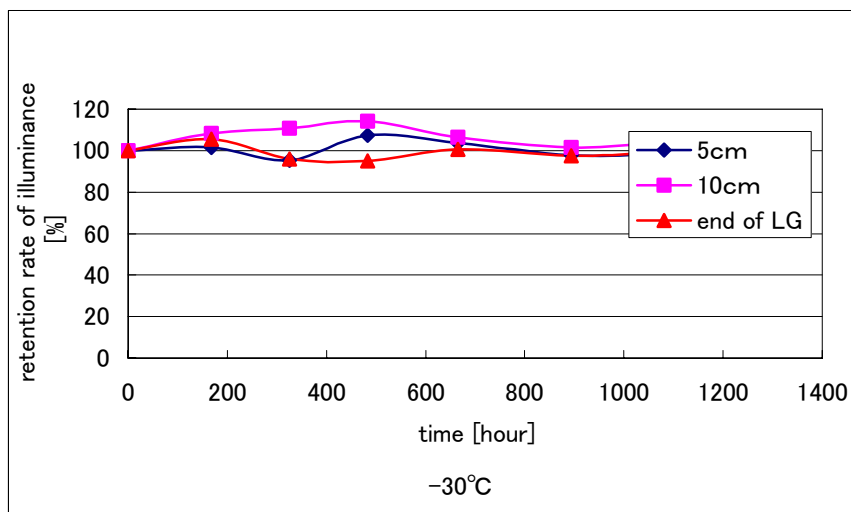


II – 2 cold resistant test

Elastomer light-guide S was put into ovens of temperature -30°C , changes of illuminance intensities were measured at specified time intervals.

Sample length: 15cm

Measuring point: 5cm from LED, 10cm from LED and end of light-guide



II – 3 heat shock、heat cycle

heat shock condition

85°C(60min.)~ -40°C(60min.)

| Number of cycles | 5cm from LED | 10cm from LED |
|------------------|--------------|---------------|
| 10 | 84.7% | 87.8% |
| 30 | 90.4% | 91.1% |
| 50 | 86.1% | 82.4% |

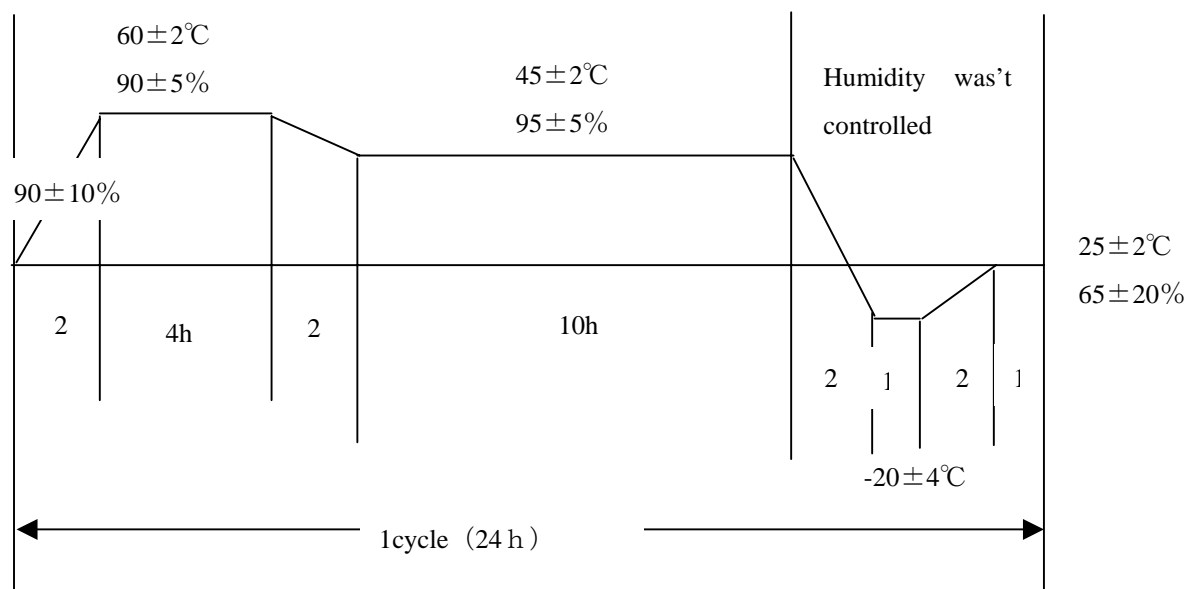
heat cycle condition

75°C(30min.)~RT.(10分)~-30°C(30min.)~RT.(10min.)

| Number of cycles | 5cm from LED | 10cm from LED |
|------------------|--------------|---------------|
| 5 | 93.4% | 95.7% |

II – 4 temperature-humidity cycle

Cycle condition described as follows.



| Number of cycles | 5cm from LED | 10cm from LED |
|------------------|--------------|---------------|
| 5 | 87.5% | 91.4% |