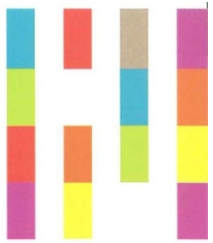


SLG-50S

Optical fiber light source
equivalent to the brightness of 250W metal halide light sources

Equipped with long-lived **LEDs**



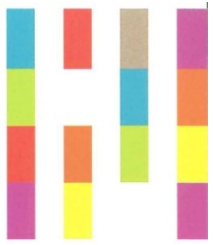


- SLG-50S Series

- Index -

1. Product outlines, features and specifications
2. Performances
3. Comparison of lifetime and cost with those of the existing light sources
4. Sales history and examples of introduction





- SLG-50S Series

1. Product outlines, features and specifications

■ Outlines

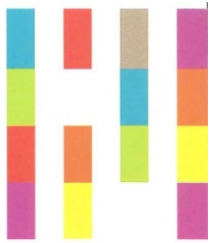
This SLG-50S series has been highly evaluated by the customers in various business fields as a line lightening mainly for Web inspections.

■ Features

- Brightness of more than that of metal halide 250W light sources
- High uniformity light output
- Four colors (White, red, green and blue) selectable
- Excellent linearity characteristics
- No UV contained
- POF available
- Long life time(30,000 hours)
- CE and EU RoHS compliant



- SLG-50S Series



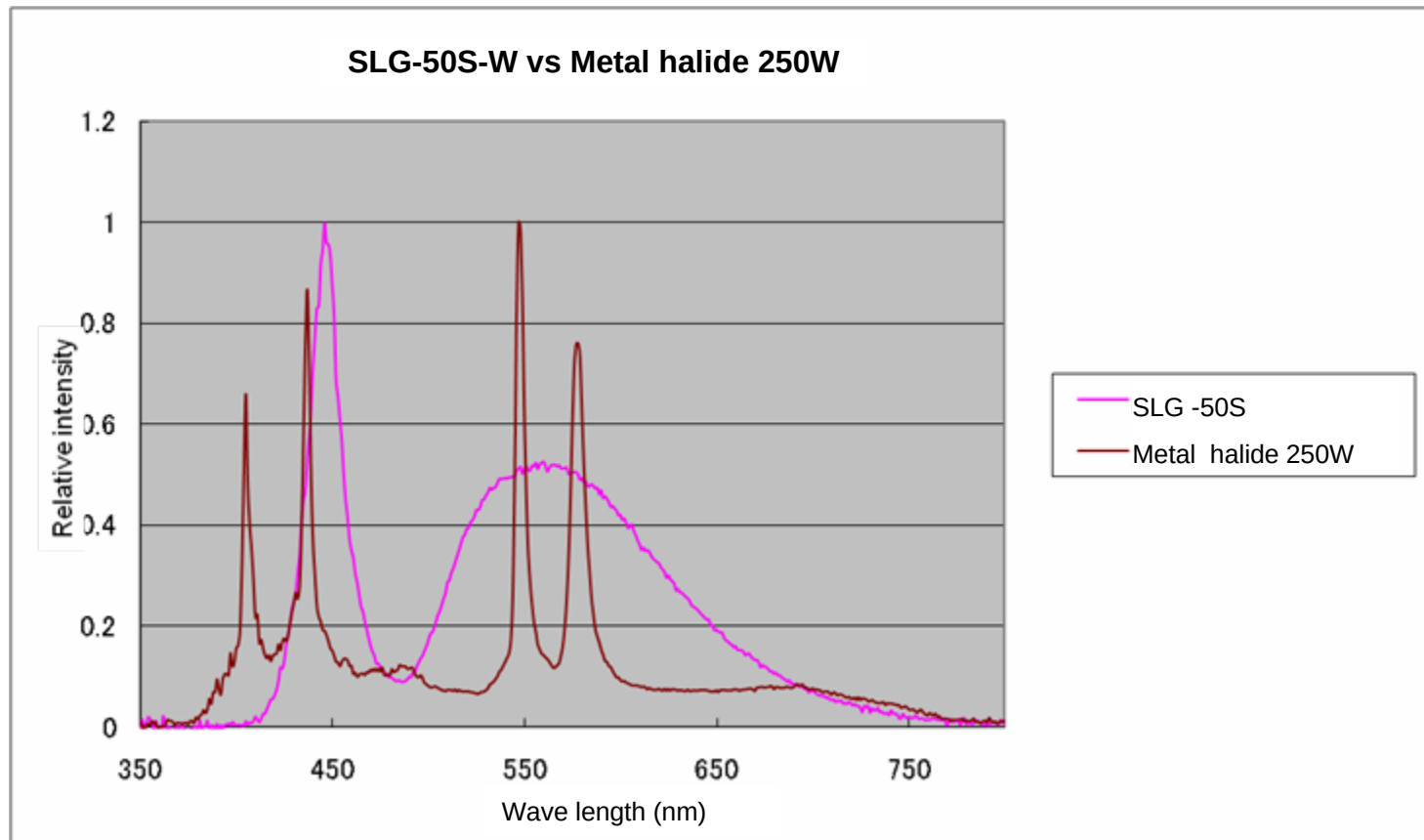
■ Product specification

- Luminous flux of LED device: 2100 lm max.
- Power consumption: Approx. 83VA
- Recommended fiber bundle diameter: $\phi 6$ to 14mm
 - * Please ask us when you need the one for more large diameter.
- Dimming range: 10 to 100%
- Illuminance control: Manual
External
 - 0 to 5V analog control
 - 8-, 9-, 10- and 12- bit digital signal control
 - Serial communications commands
 - Ethernet (available as option)



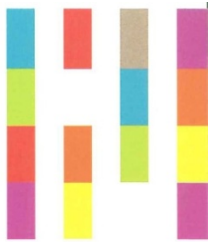
- SLG-50S Series

■ SLG-50S Spectral characteristics (comparison with 250W metal halide)

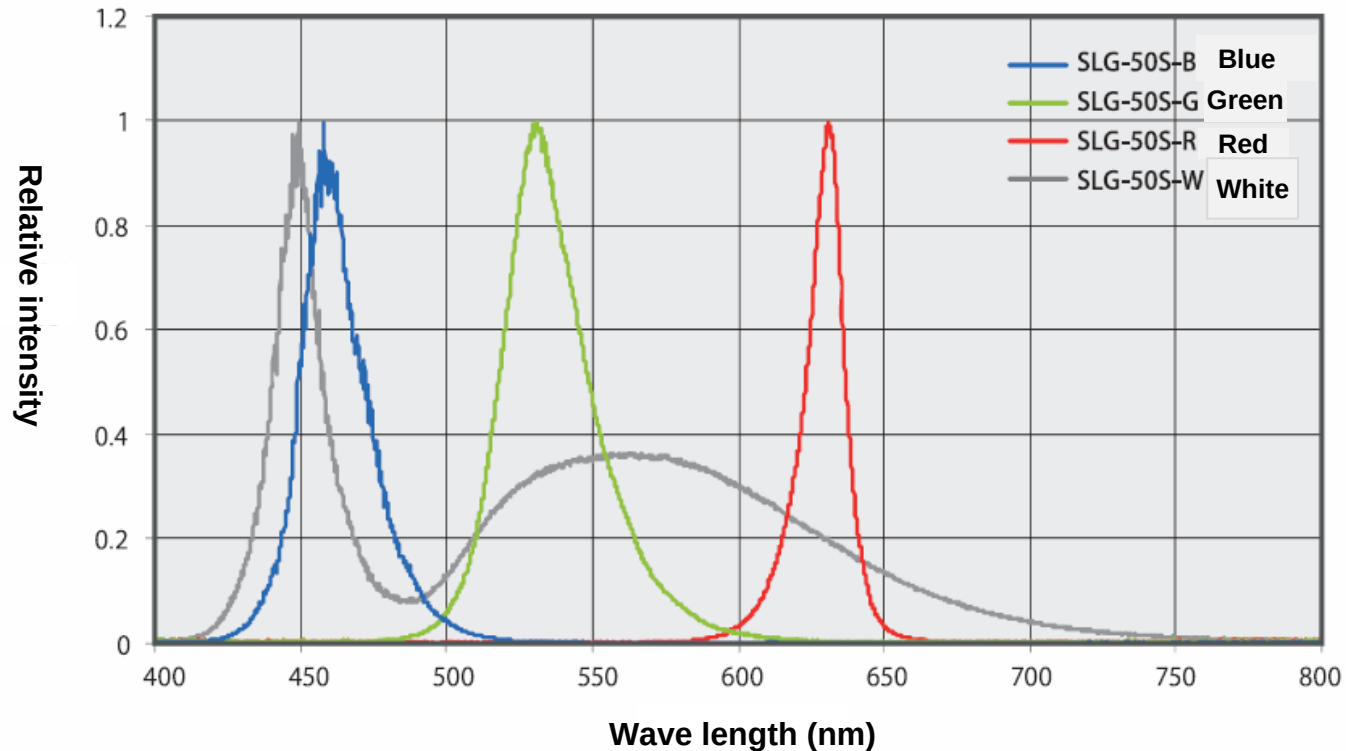


※Relative intensity “1” shows the maximum intensity for each light source.

- SLG-50S Series



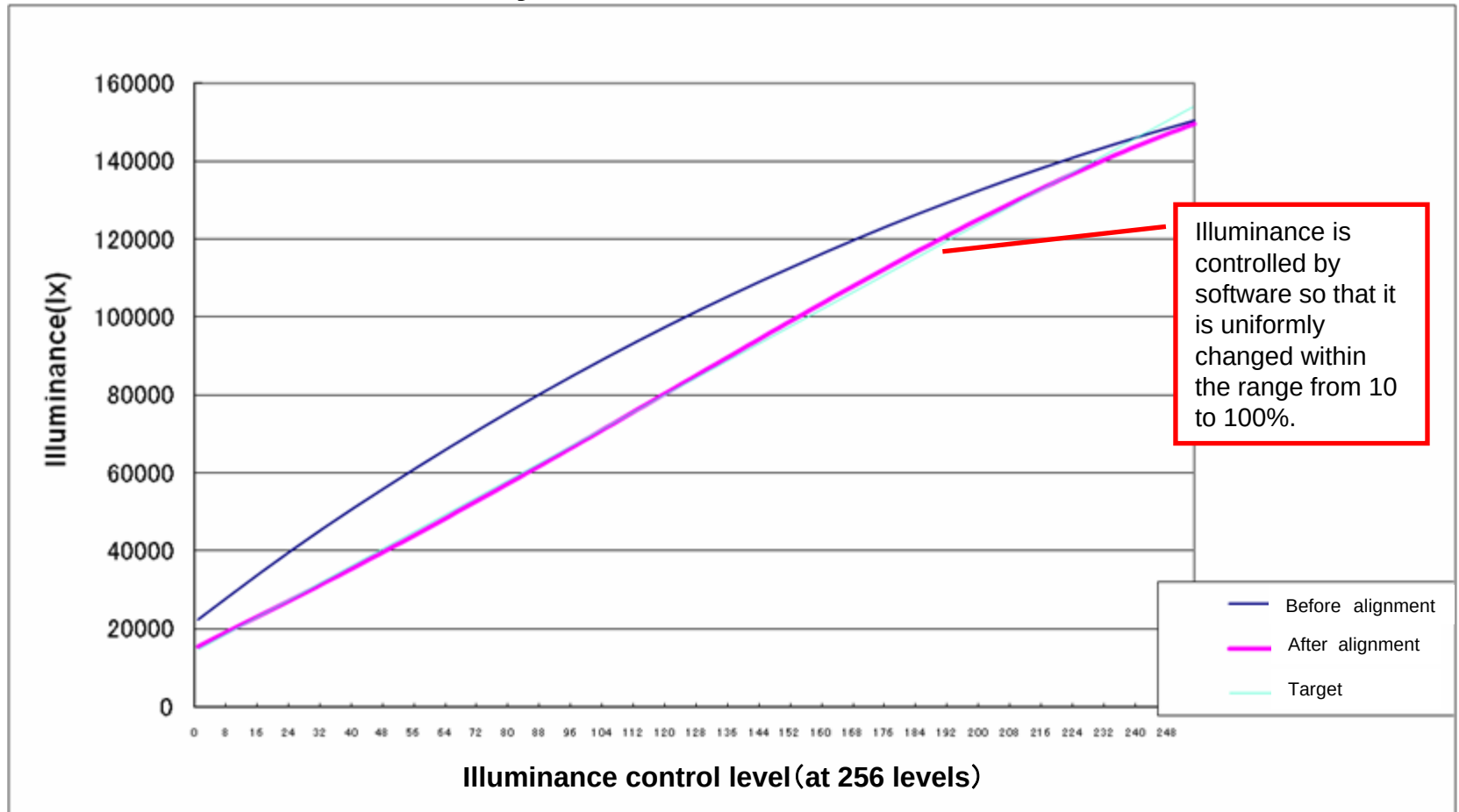
■ SLG-50S Spectral characteristics (Blue, green, red and white)



※Relative intensity “1” shows the maximum intensity for each light source.

- SLG-50S Series

■ Excellent linearity characteristics



※The above illuminance values are those measured through ND filter with our company - made measurement tools.

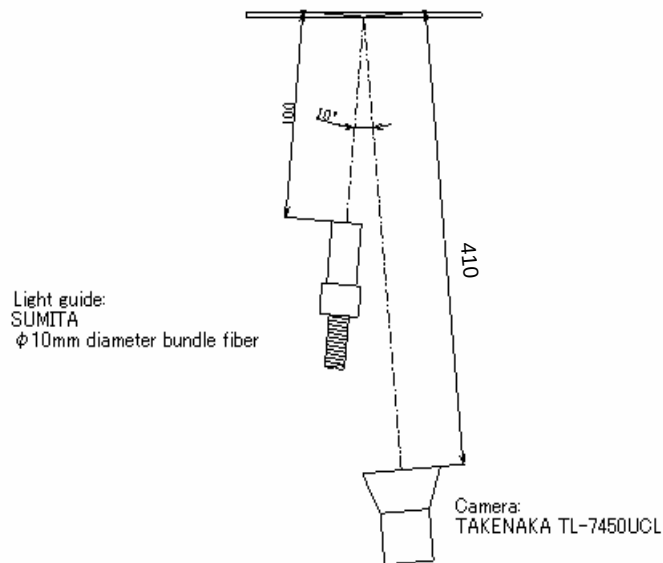


- SLG-50S Series

2. Performances

- Comparison of intensity of light and uniformity by the line light guide with those of metal halide light sources (Reference values)

Light source	Relative intensity	Ununiformity
SLG-50S	100%	12%
Metal halide 250W	81%	43%



Measurement conditions: Regular reflection 10°
(as shown in the left figure)

CCD Camera: TAKENAKA TL-7450UCL
Line light guide: SUMITA glass fiber
Bundle diameter ϕ 10mm,
Width 200mm

LWD: 100mm
WD: 410mm

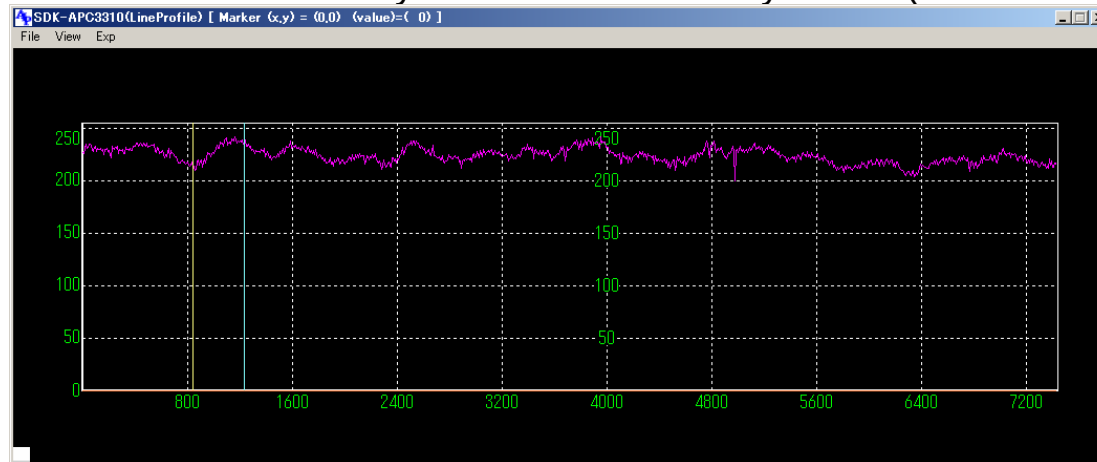
Metal halide 250W : SUMITA LS-M250

※The above values will vary according to the applications or measurement conditions applied.

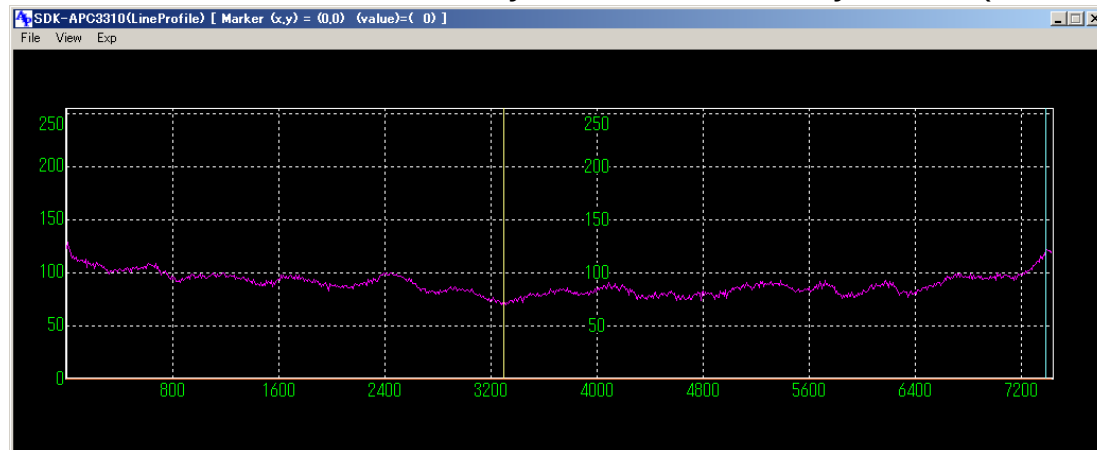
- SLG-50S Series

< Reference data >

- SLG-50S Relative Intensity : 100% Ununiformity : 12% (with 1/64 ND filter)



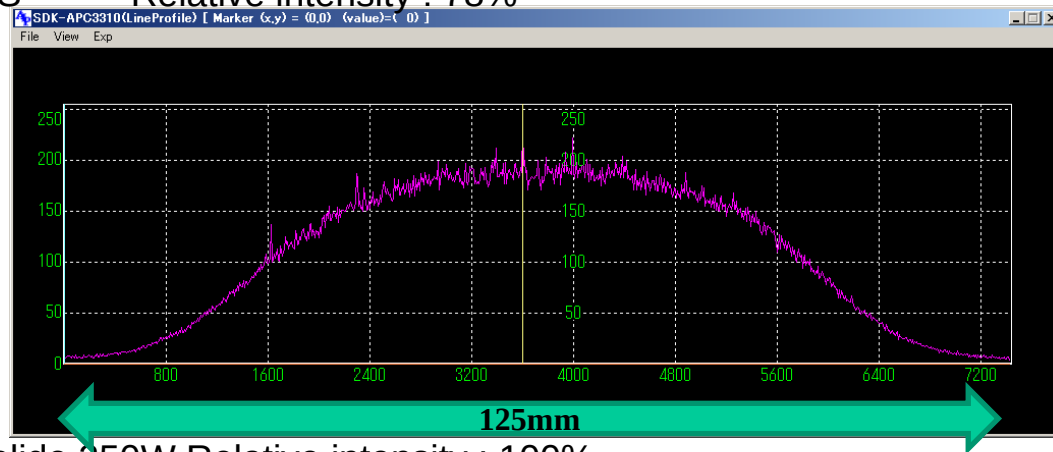
- Metal halide 250W Relative Intensity : 81% Ununiformity : 43% (with 1/128 ND filter)



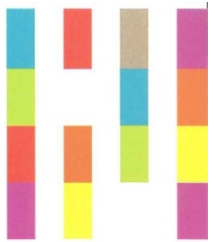
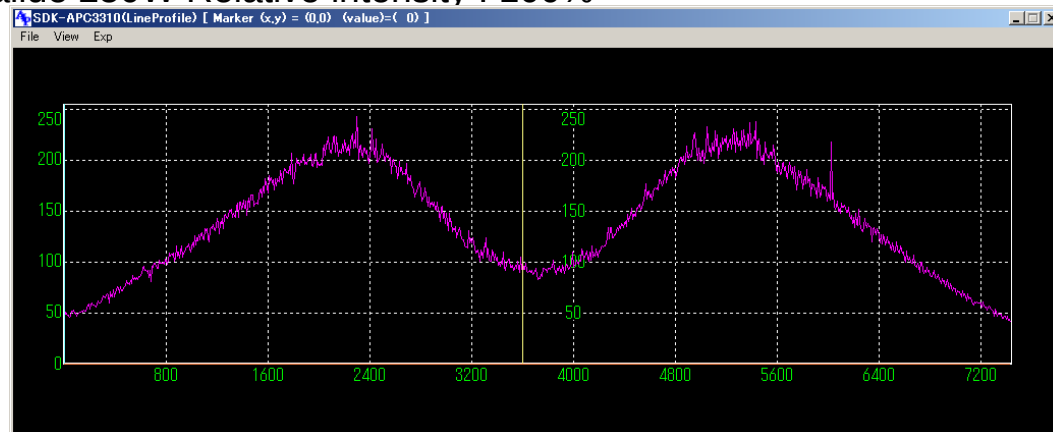
- SLG-50S Series

- Comparison of intensity of light by the straight light guide with those of metal halide light sources (Reference data)

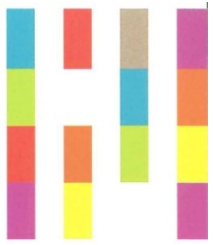
- SLG-50S Relative intensity : 78%



- Metal halide 250W Relative intensity : 100%



※Measurement conditions: Regular reflection 10° , with a Straight light guide, ϕ 6mm-Bundle diameter, 410mm- WD and 100mm- LWD.



- SLG-50S Series

- Comparison of images
between SLG-50S and Metal halide (Reference data)

SLG-50S(W) Illuminance control 100%

Metal halide 250W Illuminance Control 70%???

HIROMI殿ご協力により、
サンプル撮像画像を掲載する
TFTとカラーフィルタ(CF)のサンプル
SLG-50S vs メタハラ250W

※sample image

- SLG-50S Series

3. Comparison of life time and cost with those of metal halide light sources

■ Life time

30,000 hours

(15 times as long as that of metal halide light sources)

■ Cost

Comparison of cost (ref. value) between Metal halide

250W light sources and SLG-50S after use of 50,000 hours

(※Note 1)

Reduction of
CO2 emission
670kg/year

Cost of
Approx.580
thousand yen
can be reduced

Light source	Life time(h) ※Note 2	Power Consump- -tion (W)	Accum. Power consump- -tion(KW)	Power cost(¥) ※Note 3	Lamp cost (JPY/pc) ※Note 4	Number of lamps (pc)	Amount of total lamp cost (JPY)	TTL amount of cost (JPY)
Metal halide 250W	3,000	250	12,500	258,375	35,000	16	560,000	818,375
SLG-50S	30,000	83	4,150	85,781	150,000	1	150,000	235,781

※Note 1: 50,000 hours: Approx.5 years and 9 months in case of use for
24hours/day × 365 days

※Note 2: Metal halide: Life Time (2000 hours , generally speaking) by the time when illuminance
becomes the 60% of max. value

SLG-50S: Life time by the time when illuminance becomes 70% of the max. value.

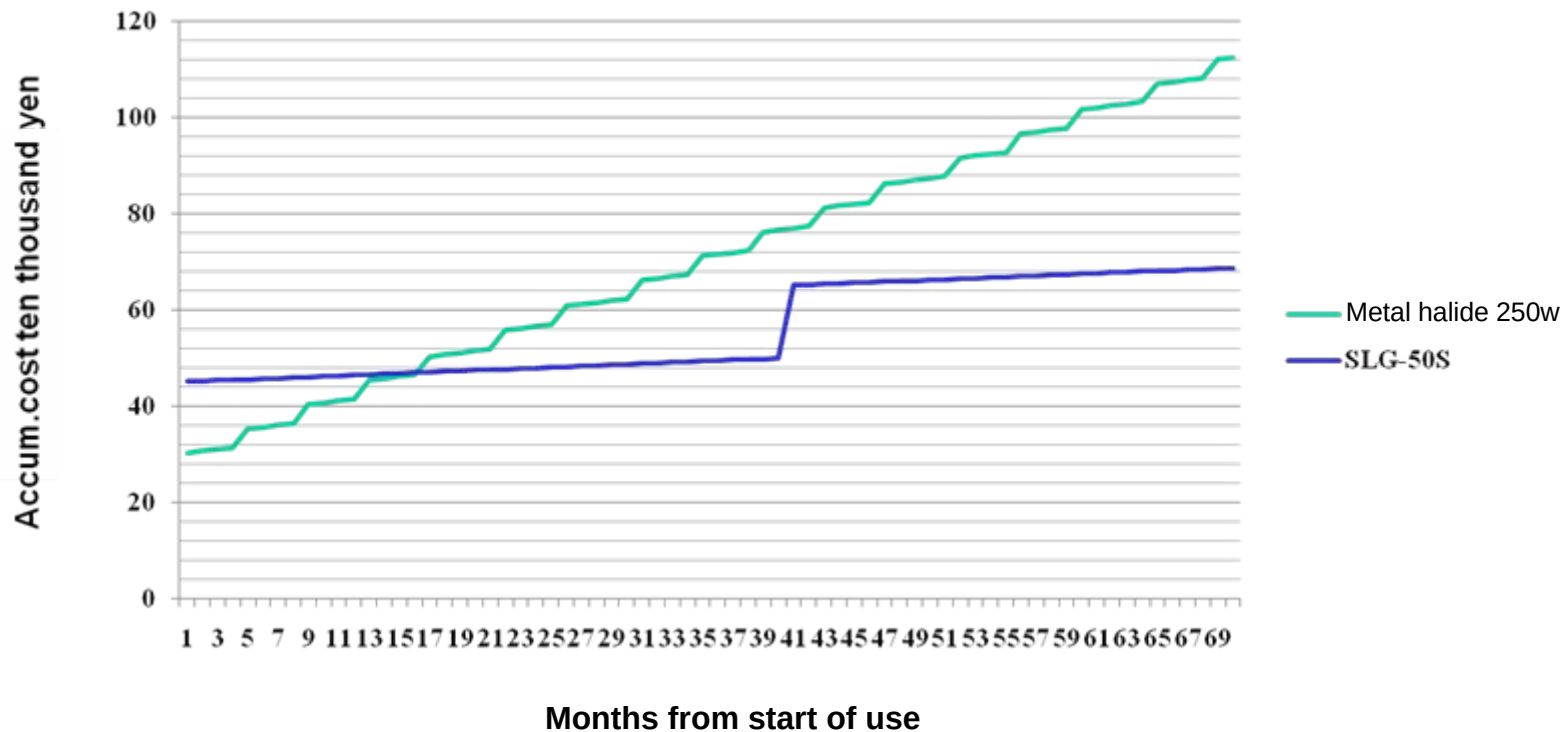
※Note 3: In case power cost/1kWh is 20.67 yen

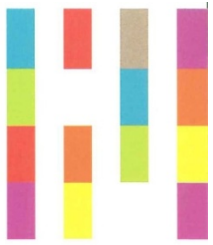
※Note 4: (For SLG-50S) Includes only cost for exchanging LEDs by send-back method.

Personnel cost for exchanging lamps at customer side and other related cost are excluded.

- SLG-50S Series

- Comparison of accumulated amount of initial and running cost
Reference comparison of cost for metal halide 250W light sources
and that for SLG-50S in case of use for 50,000 hours (69 months)





- SLG-50S Series

4. Sales history and example of introduction

- Accum. sales (From Feb./2010 to Jan./2011)

 - Number of Standard and custom-made SLG-50S:

 - 400 sets or more

 - In addition to the above, OEM products are sold to two Japanese companies under the license contract.

- Customer

 - Japanese and overseas (Korea and Taiwan) manufacturers and sales companies of inspection apparatuses

 - ex. FUTEK, KUBOTEK, TAKANO, MEC and others

- End users

 - Manufacturers of LC panels, various films and photovoltaic power generation panels

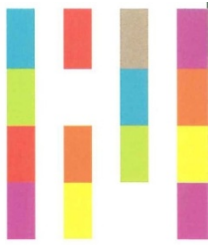
 - ex. Samsung Electronics, LG Display, AGC and others

- Example of introduction

 - ① Industrial use: As a line lightening light source used for inspection apparatuses of transmittance or reflection method

 - ② For R/D: As an image processing light source used in the medical and biological fields

- SLG-50S Series



Thank you for your kind attention.