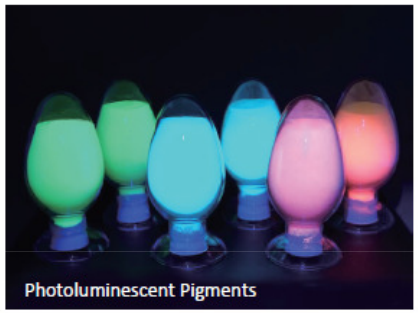
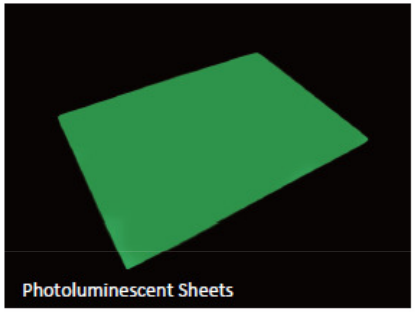
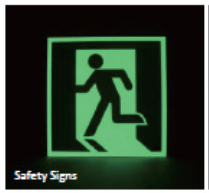
LumiGLOW

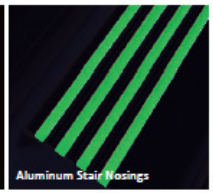
Developed from JAPAN


Photoluminescent Pigments


Photoluminescent Sheets

Photoluminescent Tapes


Safety Signs


Aluminum Stair Nosings

Sign

fudo solutions

Fudo Solutions Co., Ltd. (Head office)
888/208 Srinagarindra Road, Suanluang,
Suanluang, Bangkok 10250, Thailand
Tel. 02-347-6004 / Mobile. 092-259-8592
E-mail: admin@fudo.co.th

Photoluminescent Pigments

Super glow ★★★★★
High glow ★★★★
Standard ★★★

Benefits

- Environmentally-Friendly, Non-toxic, Non-radioactive (Strontium Aluminate Based)
- Long lasting afterglow, World Highest Performance
- LED-light-source-compatible (wide range of excitation wavelengths)

Grades and Characteristics

Test method: Excitation with Xenon light of 1000 lux for 5 minutes

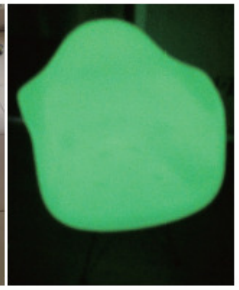
Glowing Color	Pigment Color	Grade	Code	Formula	Particle Size (D50)	Afterglow luminance (mcd/m²)			
						2 minutes	10 minutes	30 minutes	60 minutes
Green	Yellow-green	★★★★	GLG04000	$SrAl_2O_4$:Eu,Dy	0 - 100 μ	1,611	394	127	60
			GLG11030		30 μ	1,151	282	91	43
		★★★★★	GLG11060		60 μ	2,052	484	150	68
	Pink	★★	PLG11060	$SrAl_2O_4$:Eu,Dy	60 μ	489	111	34	15
	Orange	★★	OLG11060	$SrAl_2O_4$:Eu,Dy	60 μ	389	93	28	12
Blue	Blue-green	★★★★	BLG11060	$Sr_4Al_{14}O_{25}$:Eu,Dy	60 μ	1,200	311	91	37

- Order more than 25 kg can be customized for desired luminance and grain size. Please contact us for specific requirements.
- Pigments can be added to resins, inks, and paints

Examples of Use

【Glow Buddha】

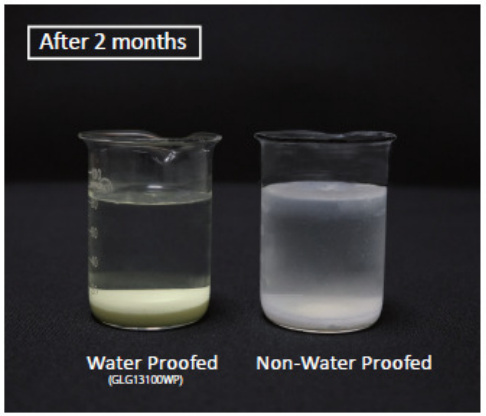
【Glow Chair】

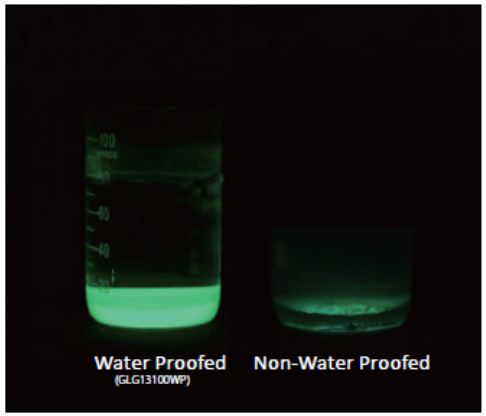


【Glow Stones】

Waterproof Photoluminescent Pigments

Super glow ★★★★★
High glow ★★★★





Benefits

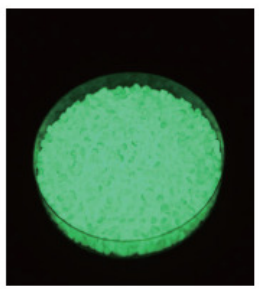
- PATENTED Coating Formulation provide even higher luminance and stable performance in water (Japanese patent obtained)
- Excellent Water Resistant
- The pH level of the Water Proof Pigments in water after 3 month remains "7.0" stable
- Non-toxic, Non-radioactive

Grades and Characteristics

Glowing Color	Pigment Color	Grade	Code	Formula	Particle Size (D50)	Afterglow luminance (mcd/m²)			
						2 minutes	10 minutes	30 minutes	60 minutes
Green	Yellow-green	★★★★★	GLG11030WP	$SrAl_2O_4$:Eu,Dy	30 μ	2,070	513	166	77
			GLG11060WP		60 μ	2,246	552	174	78
			GLG13100WP		100 μ	3,239	803	253	115
			GLG13500WP		500-1000 μ	4,327	1,206	401	192

- Test method: Excitation with Xenon light of 1000 lux for 5 minutes
- Orders of 25 kg or more can be customized for desired luminance and grain size. Please contact us for specific requirements.
- All photoluminescent pigments including Blue Pigment can be supplied as waterproofed.
- Pigments can be added to resins, inks, and paints.

Photoluminescent Masterbatches



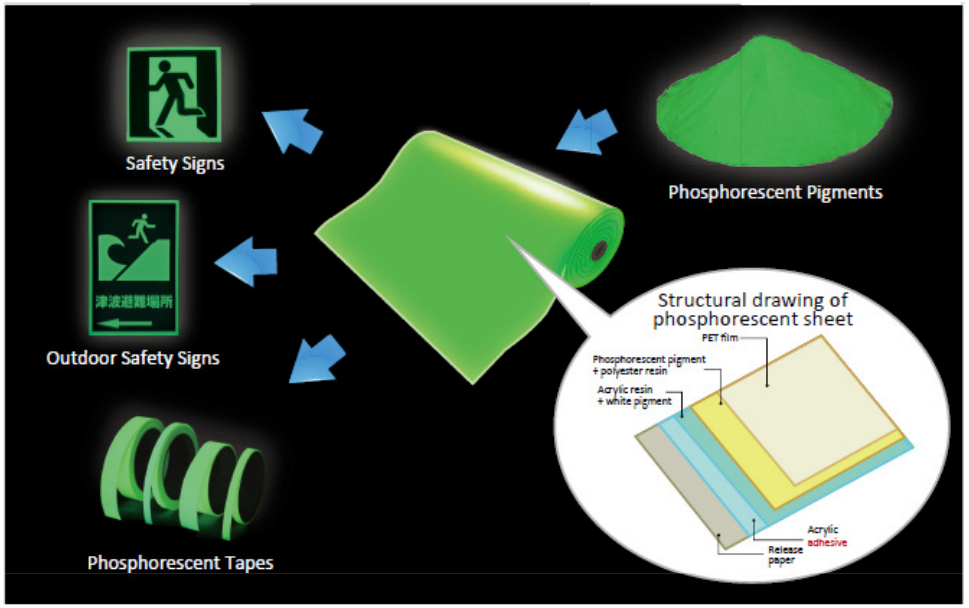
▼Afterglow luminance (PP 30%) Grade: ★★★★

Elapsed time	2 minutes	10 minutes	30 minutes	60 minutes
Luminance (mcd/m²)	1,488	350	110	51
Specification of DIN 67510 Class D	1,100	260	85	35

- Test method: Excitation with Xenon light of 1000 lux for 5 minutes
- Available in a range of plastic types: PP, PE (HDPE/LDPE), PVC, EVA, PS,PC,ABS
- Concentrate: 10-40%

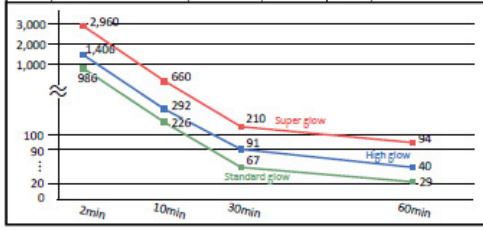
Phosphorescent Sheet

Super glow ★★★★★
High glow ★★★★
Standard ★★★



- The Best Performance in the World
- Environmentally - Friendly, Non-Toxic, Non-Radioactive
- Extremely Durable
- Easy Installation, Just stick it on the construction surface

DIN - CLASS E					DIN - CLASS D					DIN - CLASS C				
Super glow Code: SLGS ★★★★★					High glow Code: HGS ★★★★					Standard glow Code: SGS ★★★				
Elapsed time (min)	2 min	10 min	30 min	60 min	Elapsed time (min)	2 min	10 min	30 min	60 min	Elapsed time (min)	2 min	10 min	30 min	60 min
Luminance (mcd/m²)	2,960	660	210	94	Luminance (mcd/m²)	1,406	292	91	40	Luminance (mcd/m²)	986	226	67	29
DIN-Class E	2,200	520	170	70	DIN-Class D	1,100	260	85	35	DIN-Class C	690	140	45	20
Size	1,200 mm x 30 M		Thickness	0.56mm	Size	1,200 mm x 30 M		Thickness	0.32mm	Size	1,200 mm x 30 M		Thickness	0.22mm



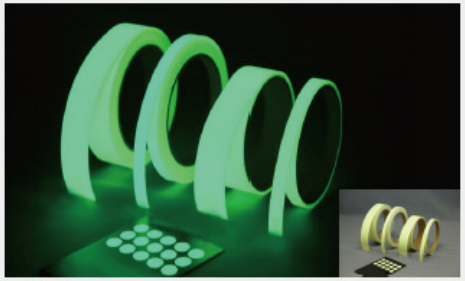
DIN67510-4:2008-2 Sub-classification	Minimum luminance(mcd/m²) after a decay time of			
	2 min	10 min	30 min	60 min
A	108	23	7	3
B	210	50	15	7
C	690	140	45	20
D	1,100	260	85	35
E	2,200	520	170	70

*Measurement of the photoluminescence according to DIN 67510-4:2008-2
*Testing Institution: SLGS/HGS---Federal Institute of Metrology METAS Schweizerische Eidgenossenschaft SLS---LTI Corporation

Phosphorescent Tapes

Super glow ★★★★★
High glow ★★★★

Supe Lumi GLOW — DIN-Class E



Features

- World's highest level luminance and afterglow time

■ Code

Code	Size
SLG1001	10 mm × 1 M
SLG1005	10 mm × 5 M
SLG1501	25 mm × 1 M
SLG1505	25 mm × 5 M
SLG10P	Round sticker 10 mm in diameter, Qty: 15 pieces

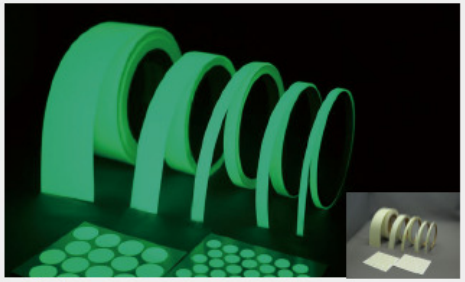
Material: PET; Phosphorescent material; Acrylic adhesive
Thickness: 0.56 mm (±0.1)

■ Luminance data

Elapsed time	2 min	10 min	30 min	60 min
Luminance (mcd/m²)	2,960	660	210	94
Class E of DIN67510	2,200	520	170	70

Measurement of the photoluminescence according to DIN 67510 Part4:2008-2

High Lumi GLOW — DIN-Class D



Features

- Highest level luminance and afterglow time

■ Code

Code	Size
HG0501	5 mm × 1 M
HG1001	10 mm × 1 M
HG1005	10 mm × 5 M
HG2505	25 mm × 5 M
HG5010	50 mm × 10 M
HG10P	Round sticker10 mm in diameter, Qty: 36 pieces
HG18P	Round sticker 18 mm in diameter, Qty: 16 pieces

Material: PET; Phosphorescent material; Acrylic adhesive
Thickness: 0.32 mm (±0.1)

■ Luminance data

Elapsed time	2 min	10 min	30 min	60 min
Luminance (mcd/m²)	1,406	292	91	40
Class D of DIN67510	1,100	260	85	35

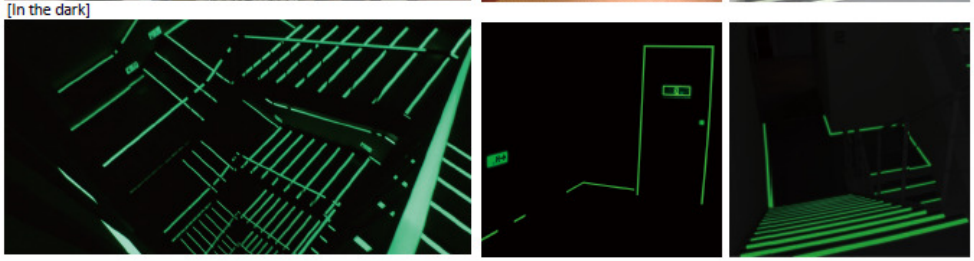
Measurement of the photoluminescence according to DIN 67510 Part4:2008-2

*Do not stick on any rough or jagged surfaces.

Installation examples

[Under daylight]

[In the dark]



Safety Signs

Super glow ★★★★★
High glow ★★★★
Standard ★★★

International Standards

- DIN67 510 Part1:2009
  Phosphorescent pigments and products - Measurement and identification by the manufacturer.
- DIN67 510 Part4:2008
  Phosphorescent pigments and products - Luminance requirements for photoluminescent materials.
- JIS Z 9107
  Safety colors and Safety signs -Classification, Performance and durability of Safety signs.
- BS ISO 16069:2004
  Graphical symbols. Safety signs. Safety way guidance systems (SWGS).
- BS ISO 3864-4:2011
  Graphical symbols - Safety colours and safety signs - Part4:Colormetric and photometric properties of safety sign materials.
- BS ISO 3864-1:2011
  Graphical symbols - Safety colours and safety signs - Part1:Design principles for safety signs and safety markings.
- BS ISO 3864-3:2012
  Graphical symbols - Safety colours and safety signs - Part3:Design principles for graphical symbols for use in safety signs.
- BS EN ISO 7010:2012
  Graphical symbols - Safety colours and safety signs - Registered safety signs.
- BS ISO 9186-1:2014
  Graphical symbols - Test methods - Methods for testing comprehensibility.

Standards and Regulations we MEET:

- International Standard Organization (ISO)
- Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
- Deutsche Industrie Normen (DIN)
- Japanese Industrial Standards (JIS)
- ASTM International (ASTM)

World Highest Performance! Easy Installation! Cost less! The reason for going our products are eliminating your electric and maintenance costs, and reducing the CO_2 produced. You can rely on it!

DIN - CLASS E					DIN - CLASS D					DIN - CLASS C				
Super glow Code: SLG (Thickness: 0.56mm)					High glow Code: HG (Thickness: 0.32mm)					Standard glow Code: SG (Thickness: 0.22mm)				
Elapsed time (min)	2 min	10 min	30 min	60 min	Elapsed time (min)	2 min	10 min	30 min	60 min	Elapsed time (min)	2 min	10 min	30 min	60 min
Luminance (mcd/m²)	2,960	660	210	94	Luminance (mcd/m²)	1,406	292	91	40	Luminance (mcd/m²)	986	226	67	29
DIN-Class E	2,200	520	170	70	DIN-Class D	1,100	260	85	35	DIN-Class C	690	140	45	20

*Testing Institution: SHL/HL—Federal Institute of Metrology METAS Schweizerische Eidgenossenschaft SL—LTI Corporation
*Do not stick on any rough or jagged surfaces.

Select the Grade code listed below when you order :

Grade		Code
Super glow	★★★★★	SLG
High glow	★★★★	HG
Standard	★★★	SG

Exit Signs

Code: 101A / 101B / 101C
Size
101A: 120mm×340mm
101B: 150mm×400mm
101C: 200mm×450mm

Code: 102A / 102B / 102C
Size
102A: 120mm×340mm
102B: 150mm×400mm
102C: 200mm×450mm

Code: 103A / 103B / 103C
Size
103A: 120mm×340mm
103B: 150mm×400mm
103C: 200mm×450mm

Code: 104A / 104B / 104C
Size
104A: 120mm×340mm
104B: 150mm×400mm
104C: 200mm×450mm

Code: 105A / 105B / 105C
Size
105A: 120mm×340mm
105B: 150mm×400mm
105C: 200mm×450mm

Code: 106A / 106B / 106C
Size
106A: 120mm×340mm
106B: 150mm×400mm
106C: 200mm×450mm

Code: 107A / 107B / 107C
Size
107A: 120mm×340mm
107B: 150mm×400mm
107C: 200mm×450mm

Code: 108A / 108B / 108C
Size
108A: 120mm×340mm
108B: 150mm×400mm
108C: 200mm×450mm

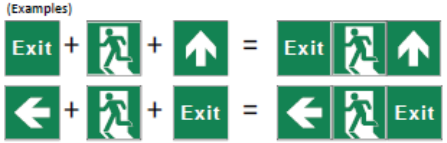
Large Exit Signs

Code: 201D / 201G
Size
201D: 300mm×300mm
201G: 150mm×150mm

Code: 202D / 202G
Size
202D: 300mm×300mm
202G: 150mm×150mm

Code: 203D / 203G
Size
203D: 300mm×300mm
203G: 150mm×150mm

(Examples)



International Way Guidance Signs

Code: 301A / 301B / 301C / 301D
Size
301A : 150mm×300mm
301B : 150mm×300mm
301C : 200mm×400mm
301D : 250mm×500mm

Code: 302A / 302B / 302C / 302D
Size
302A : 150mm×300mm
302B : 150mm×300mm
302C : 200mm×400mm
302D : 250mm×500mm

Code: 303A / 303B / 303C / 303D
Size
303A : 150mm×300mm
303B : 150mm×300mm
303C : 200mm×400mm
303D : 250mm×500mm

Code: 304A / 304B / 304C / 304D
Size
304A : 150mm×300mm
304B : 150mm×300mm
304C : 200mm×400mm
304D : 250mm×500mm

Code: 305A / 305B / 305C / 305D
Size
305A : 150mm×300mm
305B : 150mm×300mm
305C : 200mm×400mm
305D : 250mm×500mm

Code: 306A / 306B / 306C / 306D
Size
306A : 150mm×300mm
306B : 150mm×300mm
306C : 200mm×400mm
306D : 250mm×500mm

Code: 307A / 307B / 307C / 307D
Size
307A : 150mm×300mm
307B : 150mm×300mm
307C : 200mm×400mm
307D : 250mm×500mm

Code: 308A / 308B / 308C / 308D
Size
308A : 150mm×300mm
308B : 150mm×300mm
308C : 200mm×400mm
308D : 250mm×500mm

Emergency Exit Door Signs / Stairway Floor Number Signs

Code: 401E / 401F / 401G
Size
401E:70mm×70mm
401F:100mm×100mm
401G:150mm×150mm

Code: 402E / 402F / 402G
Size
402E:70mm×70mm
402F:100mm×100mm
402G:150mm×150mm

Code: 403E / 403F / 403G
Size
403E:70mm×70mm
403F:100mm×100mm
403G:150mm×150mm

Code: 404E / 404F / 404G
Size
404E:70mm×70mm
404F:100mm×100mm
404G:150mm×150mm

Code: 405E / 405F / 405G
Size
405E:70mm×70mm
405F:100mm×100mm
405G:150mm×150mm

Code: 406E / 406F / 406G
Size
406E:70mm×70mm
406F:100mm×100mm
406G:150mm×150mm

Code: 407N
Size
407N:100mm×150mm

Code: 408N
Size
408N:100mm×150mm

Code: 500 Code: 501 Code: 502 Code: 503 Code: 504 Code: 505 Code: 506 Code: 507 Code: 508 Code: 509 Code: 510

Size
500:150mm×300mm
501:150mm×300mm
502:150mm×300mm
403E:70mm×70mm
403F:100mm×100mm
403G:150mm×150mm
403E:70mm×70mm
403F:100mm×100mm
403G:150mm×150mm
403E:70mm×70mm
403F:100mm×100mm
403G:150mm×150mm

Fire Alarm Location Signs / Emergency Shutdown Sign

Code: 601E / 601F / 601G
Size
601E:70mm×70mm
601F:100mm×100mm
601G:150mm×150mm

Code: 602E / 602F / 602G
Size
602E:70mm×70mm
602F:100mm×100mm
602G:150mm×150mm

Code: 603E / 603F / 603G
Size
603E:70mm×70mm
603F:100mm×100mm
603G:150mm×150mm

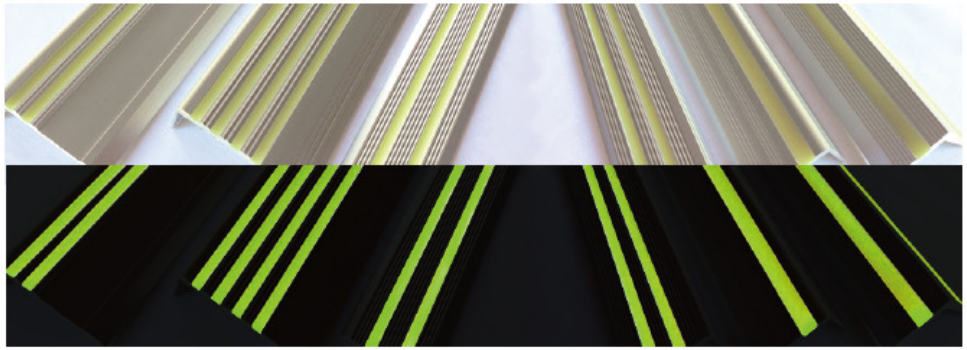
Code: 604E / 604F / 604G
Size
604E:70mm×70mm
604F:100mm×100mm
604G:150mm×150mm

Code: 605E / 605F / 605G
Size
605E:70mm×70mm
605F:100mm×100mm
605G:150mm×150mm

Code: 606E / 606F / 606G
Size
606E:70mm×70mm
606F:100mm×100mm
606G:150mm×150mm

Aluminum Phosphorescent Stair-Nosings

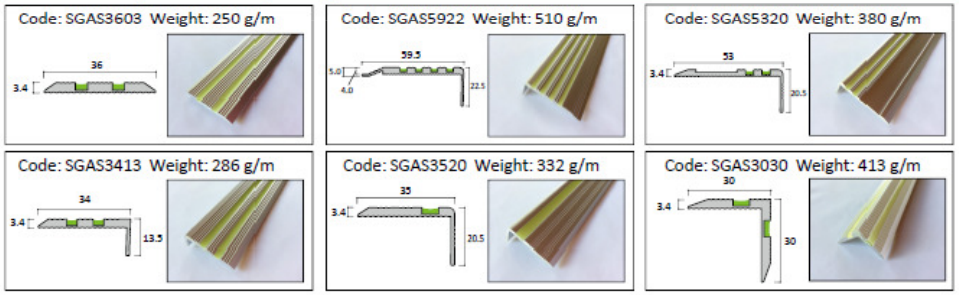
Super glow ★★★★★



Benefits

- Amazingly bright!
- Extremely durable
- For indoor and outdoor applications
- Strong protective layer in Phosphorescent areas
- Easy installation with construction adhesive, screw or glues

Aluminum Phosphorescent Step Nosings



Material: Aluminum extruded shapes; Phosphorescent portion: Phosphorescent material + polyester resin
Length:1400mm/PC maximum Instllation:Construction adhesive, screw or glues. MOQ:50M

Luminance Data

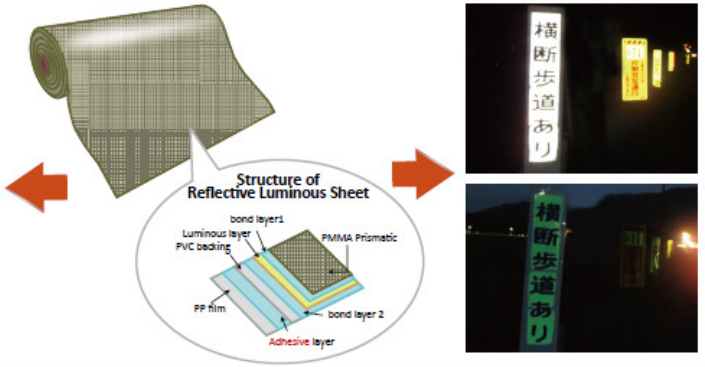
Elapsed time	2 minutes	10 minutes	30 minutes	60 minutes
Luminance (mcd/m²)	5,179	1,071	280	105
Specification of DIN 67510 Class E	2,200	520	170	70

Installation Example

[Under daylight] [In the dark]

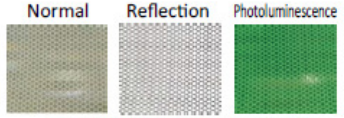
Reflective Luminous Sheet

Reflection ★★★★★
Photoluminescence ★★★★



Benefits

- Conform to ASTM D4956 Type IV, EN12899-1 RA2 (Retro-Reflectivity)
- Afterglow Time:Conform to DIN67510 Class C, JIS Z9107 JC. (Photoluminescent After-glow)
- Easy Installation, Just stick it.
- High Durability : 7 years
- Printable (Screen Printing and UV inkjet printing)



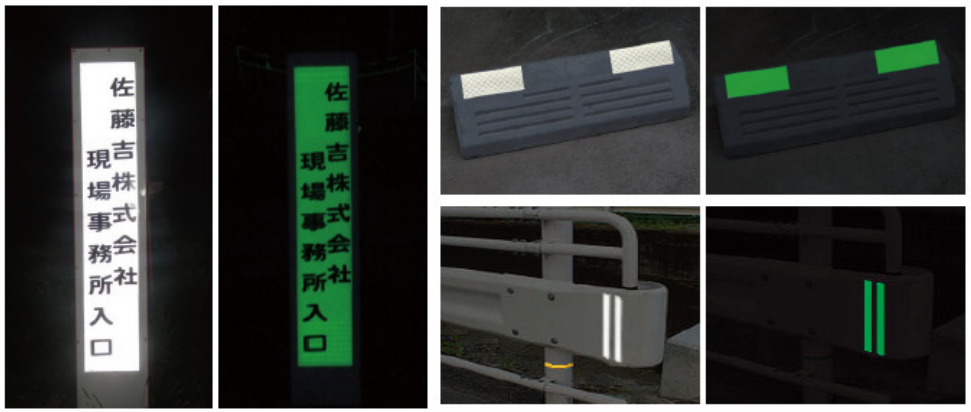
*Do not stick on any rough or jagged surfaces.

Reflective Luminous Film

	Reflection (Until: cd/lx/m²)		Photoluminescence (mcd/m²)	
Observation Angle	Entrance Angle	White Color	Elapsed Time	Luminance
0.33°	5°	275	2 minutes	1,272
0.33°	30°	134	10 minutes	283
0.5°	5°	236	30 minutes	81
0.5°	30°	137	60 minutes	36

Size : 1,220 mm x 10 M / Thickness : 600μm±5μm *Measurement of the photoluminescence according to DIN 67510 Part4

Installation Example

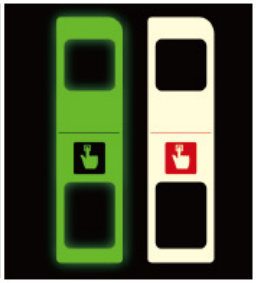


Construction Examples

■ Railroads, U.S.A (New York, Chicago and Boston)

■ High Speed Railroad, Taiwan

■ Dubai Metro, Dubai

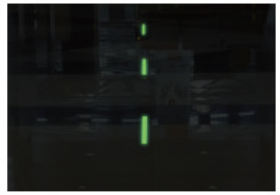


■ JR Tokai, Japan

■ Orlando International Airport, U.S.A

■ Tampa International Airport, U.S.A

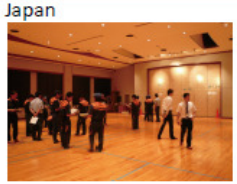
■ Soekarno-Hatta International Airport, Indonesia



■ Kansai International Airport, Japan

Construction Examples

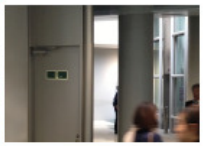
■ Fire Department, Osaka Japan



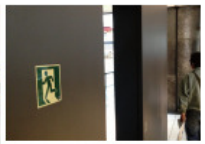
■ Seven-Eleven Japan

■ Tokyo Metro

■ Convention Center, Tokyo

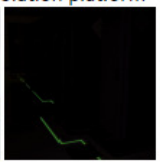


■ Shopping Mall

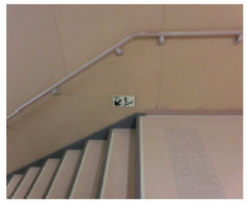


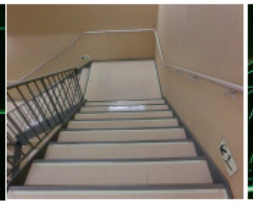
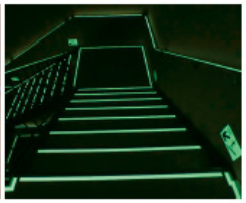
■ Ministry of Justice Government Japan

■ CTC seismic isolation platform

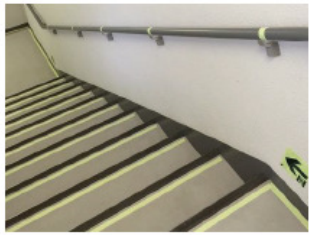
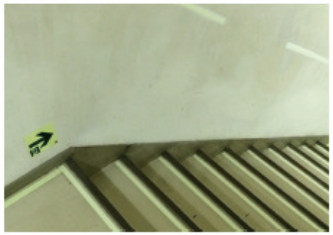


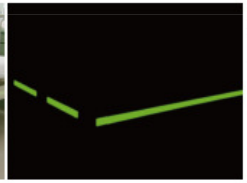
■ National Institute for Fusion Science



■ Medical Centers



■ Tsunami Evacuation Tower

■ Tsunami Evacuation Sign