

Light Bank

가이드 북

Illumination Selection Guide



경기도 화성시 팔탄면 을왕리 120-5

전화 (031)354-2202(代)
팩스 (031)354-2205

120-5, YURAM-LI, PALTAN-MYEON, HWASEONG-SHI, KYUNGGI-DO, KOREA

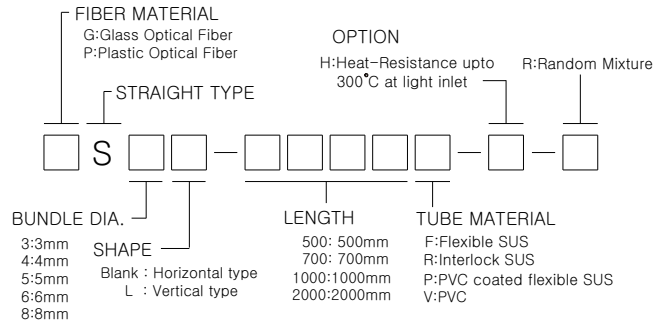
Phone +82-31-354-2202(R)
FAX. +82-31-354-2205

Homepage <http://www.skoptical.com>
E-mail skoptical@skoptical.com

Jan 2007

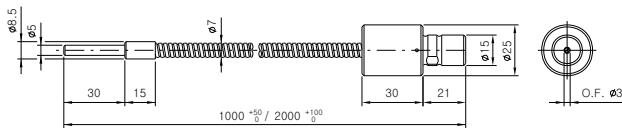
IMPROVEMENTS MAY RESULT IN SPECIFICATION OR FEATURE CHANGES WITHOUT NOTICE

Straight type



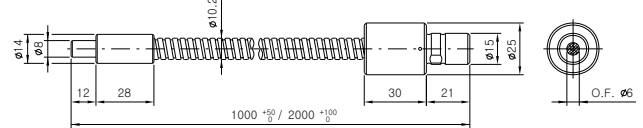
G(P)S3-1000F
G(P)S3-2000F

Min. Bending Radius 25



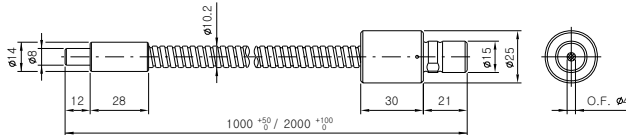
G(P)S6-1000F
G(P)S6-2000F

Min. Bending Radius 30



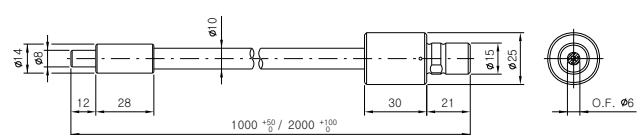
G(P)S4-1000F
G(P)S4-2000F

Min. Bending Radius 30



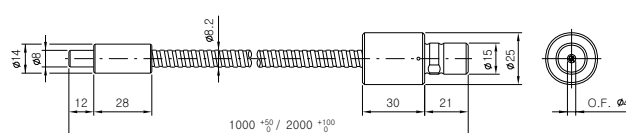
G(P)S6-1000V
G(P)S6-2000V

Min. Bending Radius 30



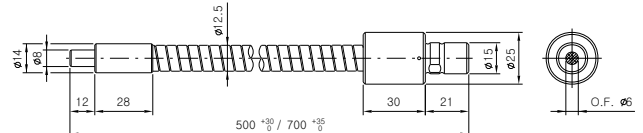
G(P)S4-1000P
G(P)S4-2000P

Min. Bending Radius 30



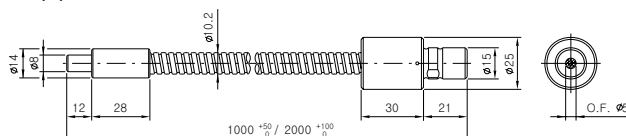
G(P)S6-500R
G(P)S6-700R

Min. Bending Radius 60



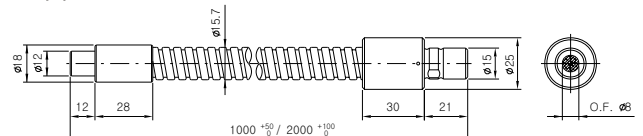
G(P)S5-1000F
G(P)S5-2000F

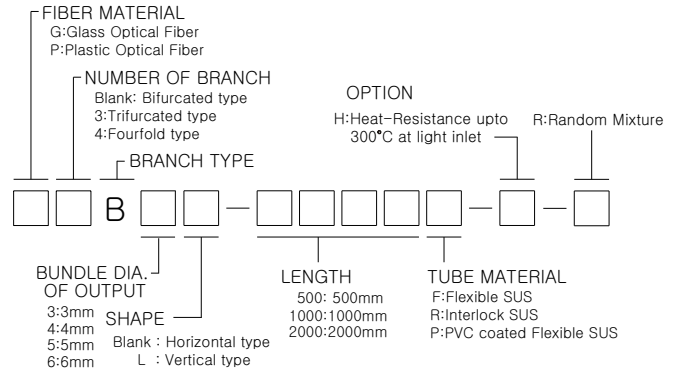
Min. Bending Radius 30



G(P)S8-1000F
G(P)S8-2000F

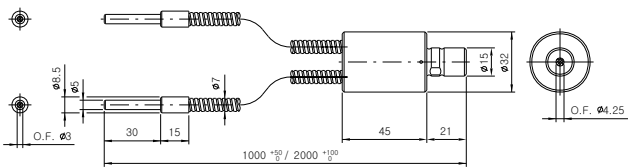
Min. Bending Radius 35





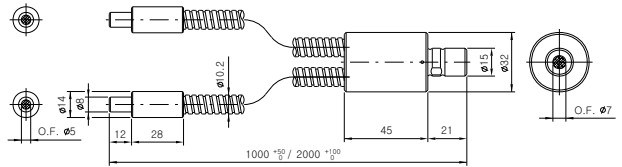
G(P)B3-1000F
G(P)B3-2000F

Min. Bending Radius 25



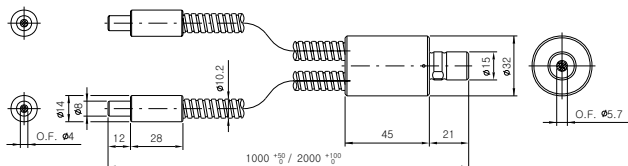
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G(P)B5-2000F

Min. Bending Radius 30



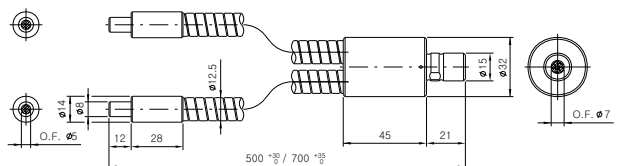
G(P)B4-1000F
G(P)B4-2000F

Min. Bending Radius 30



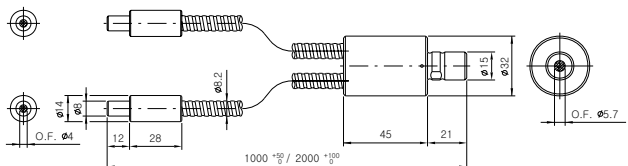
G(P)B5-500R
G(P)B5-700R

Min. Bending Radius 60



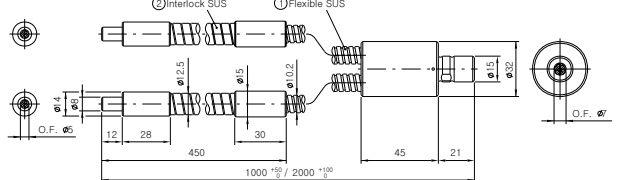
G(P)B4-1000P
G(P)B4-2000P

Min. Bending Radius 40



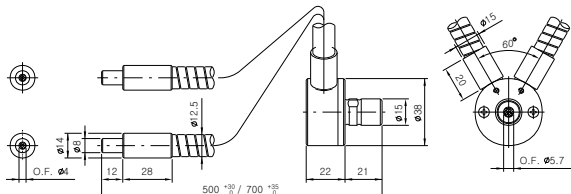
G(P)B5-1000Fr
G(P)B5-2000Fr

① Min. Bending Radius 30
② Min. Bending Radius 60



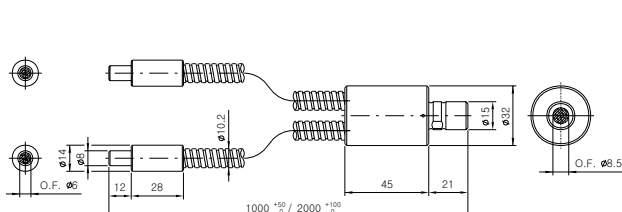
G(P)B4L-0500R
G(P)B4L-0700R

Min. Bending Radius 60



G(P)B6-1000F
G(P)B6-2000F

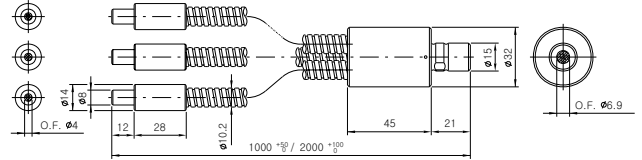
Min. Bending Radius 30





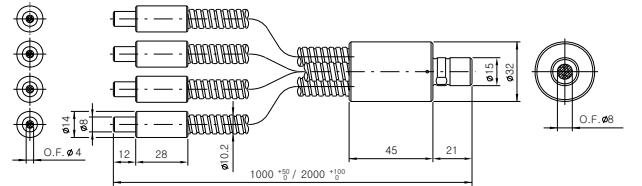
G(P)3B4-1000F
G(P)3B4-2000F

Min. Bending Radius 30



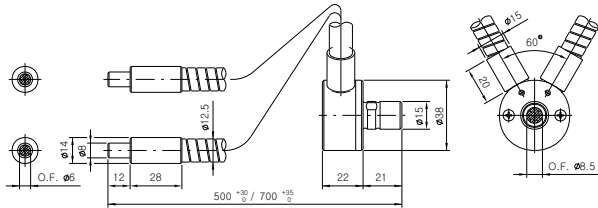
G(P)4B4-1000F
G(P)4B4-2000F

Min. Bending Radius 30



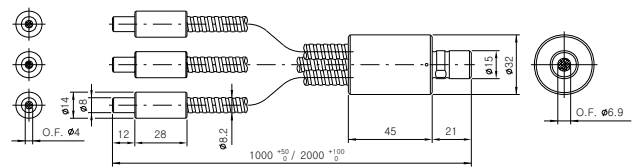
G(P)B6L-0500R
G(P)B6L-0700R

Min. Bending Radius 60



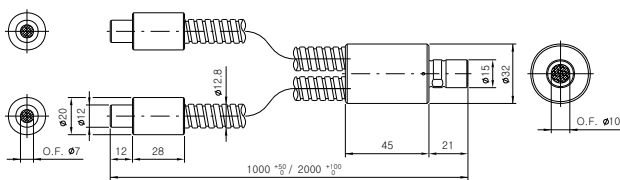
G(P)3B4-1000P
G(P)3B4-2000P

Min. Bending Radius 40



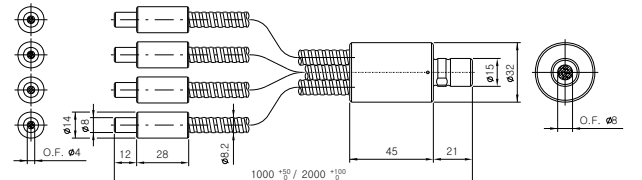
G(P)B7-1000F
G(P)B7-2000F

Min. Bending Radius 32



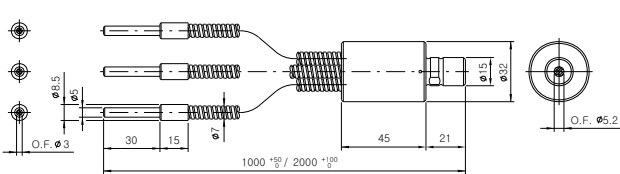
G(P)4B4-1000P
G(P)4B4-2000P

Min. Bending Radius 40



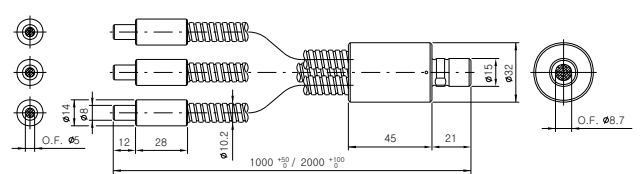
G(P)3B3-1000F
G(P)3B3-2000F

Min. Bending Radius 25



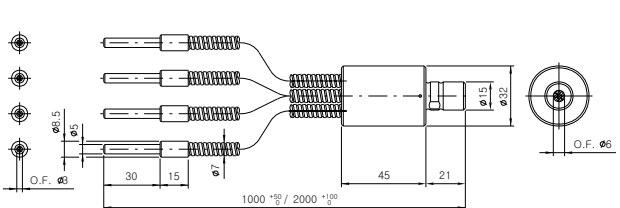
G(P)3B5-1000F
G(P)3B5-2000F

Min. Bending Radius 30



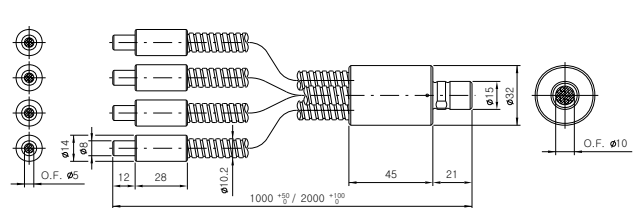
G(P)4B3-1000F
G(P)4B3-2000F

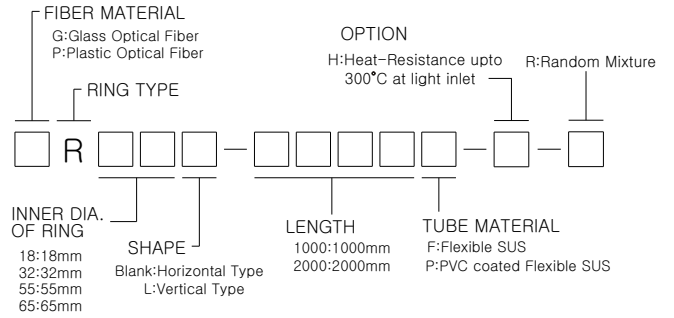
Min. Bending Radius 25



G(P)4B5-1000F
G(P)4B5-2000F

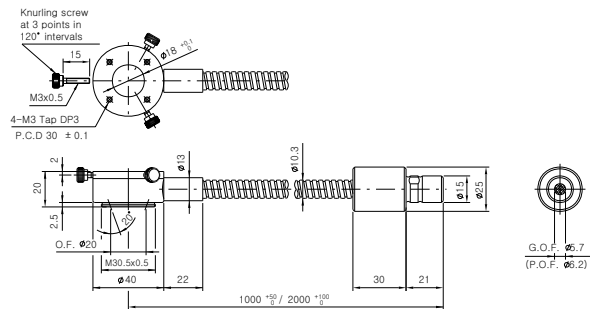
Min. Bending Radius 30





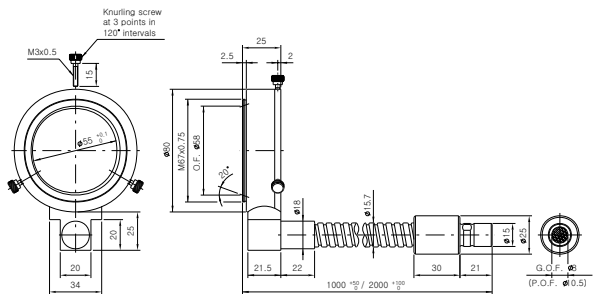
G(P)R18-1000F
G(P)R18-2000F

Min. Bending Radius 30



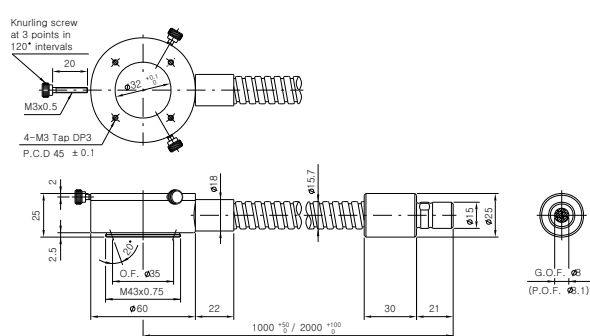
G(P)R55L-1000F
G(P)R55L-2000F

Min. Bending Radius 35



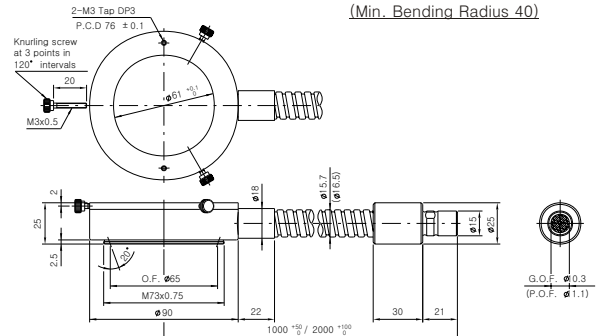
G(P)R32-1000F
G(P)R32-2000F

Min. Bending Radius 35



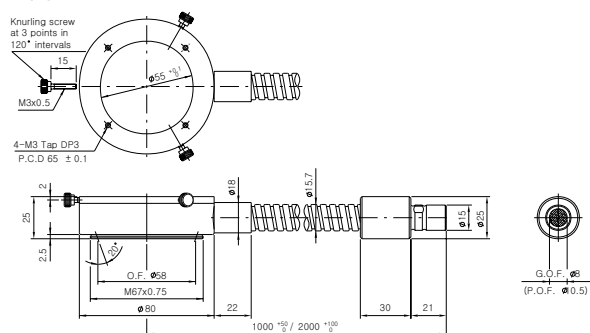
G(P)R61-1000F
G(P)R61-2000F

Min. Bending Radius 35
(Min. Bending Radius 40)



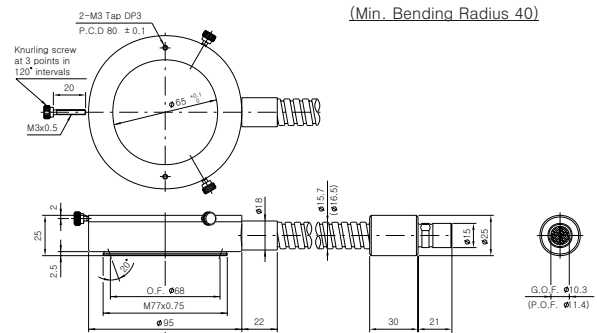
G(P)R55-1000F
G(P)R55-2000F

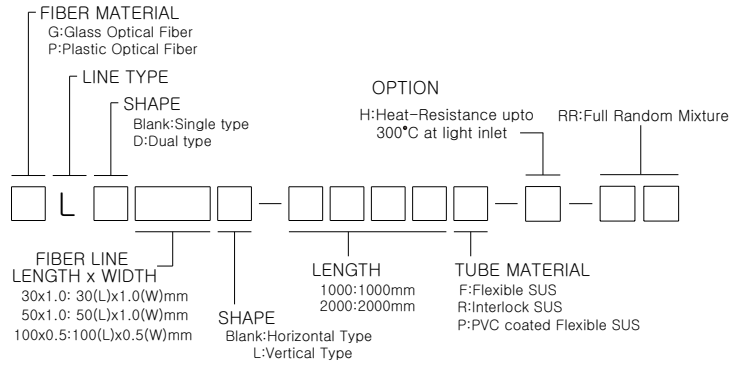
Min. Bending Radius 35



G(P)R65-1000F
G(P)R65-2000F

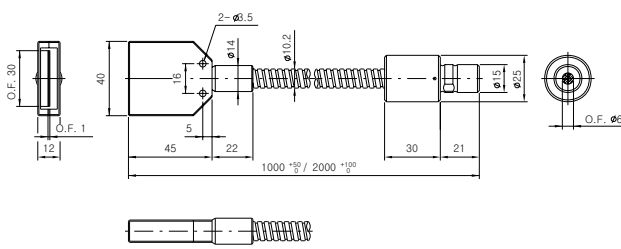
Min. Bending Radius 35
(Min. Bending Radius 40)





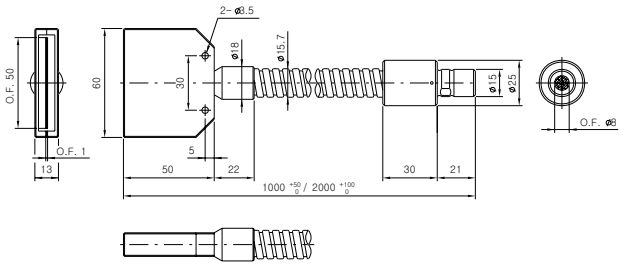
G(P)L30x1.0-1000F
G(P)L30x1.0-2000F

Min. Bending Radius 30



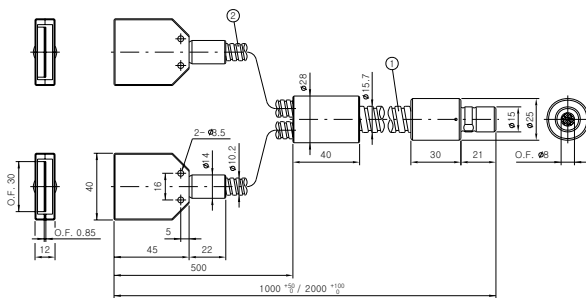
G(P)L50x1.0-1000F
G(P)L50x1.0-2000F

Min. Bending Radius 35



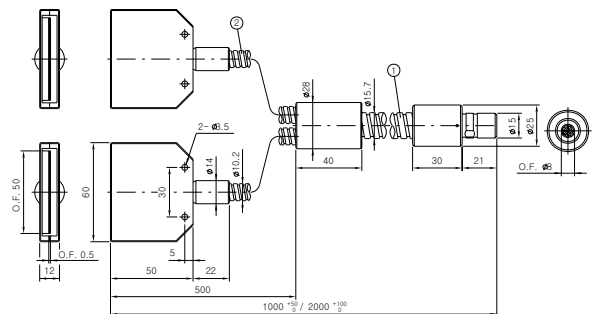
GLD30x0.85-1000F
GLD30x0.85-2000F

- ① Min. Bending Radius 35
- ② Min. Bending Radius 30



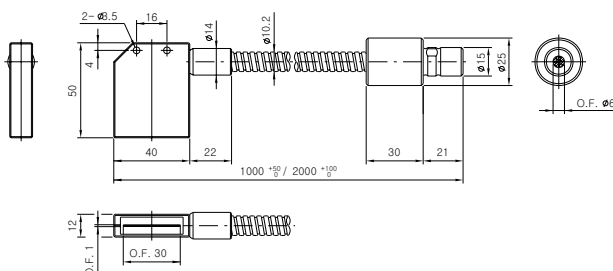
G(P)LD50x0.5-1000F
G(P)LD50x0.5-2000F

- ① Min. Bending Radius 35
- ② Min. Bending Radius 30



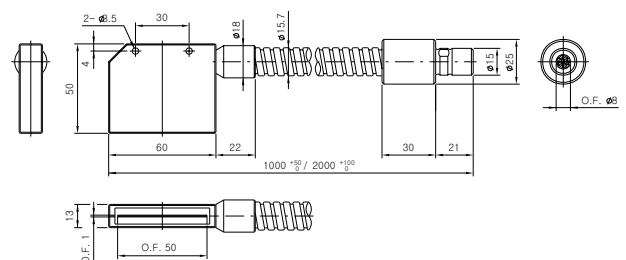
G(P)L30x1.0L-1000F
G(P)L30x1.0L-2000F

Min. Bending Radius 30



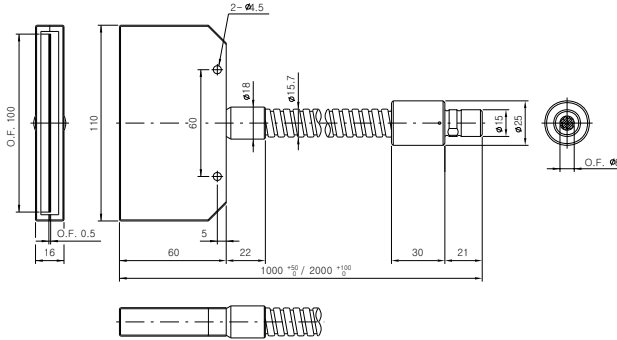
G(P)L50x1.0L-1000F
G(P)L50x1.0L-2000F

Min. Bending Radius 35



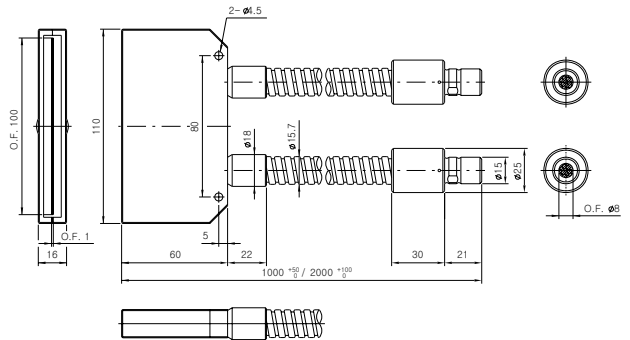
G(P)L100x0.5-1000F
G(P)L100x0.5-2000F

Min. Bending Radius 35



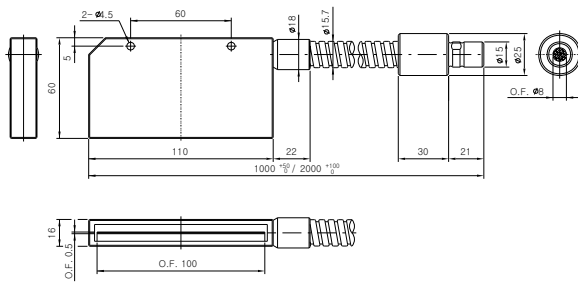
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Min. Bending Radius 35



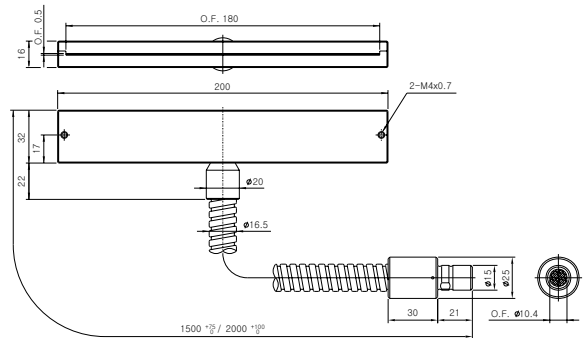
G(P)L100x0.5L-1000F
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Min. Bending Radius 35



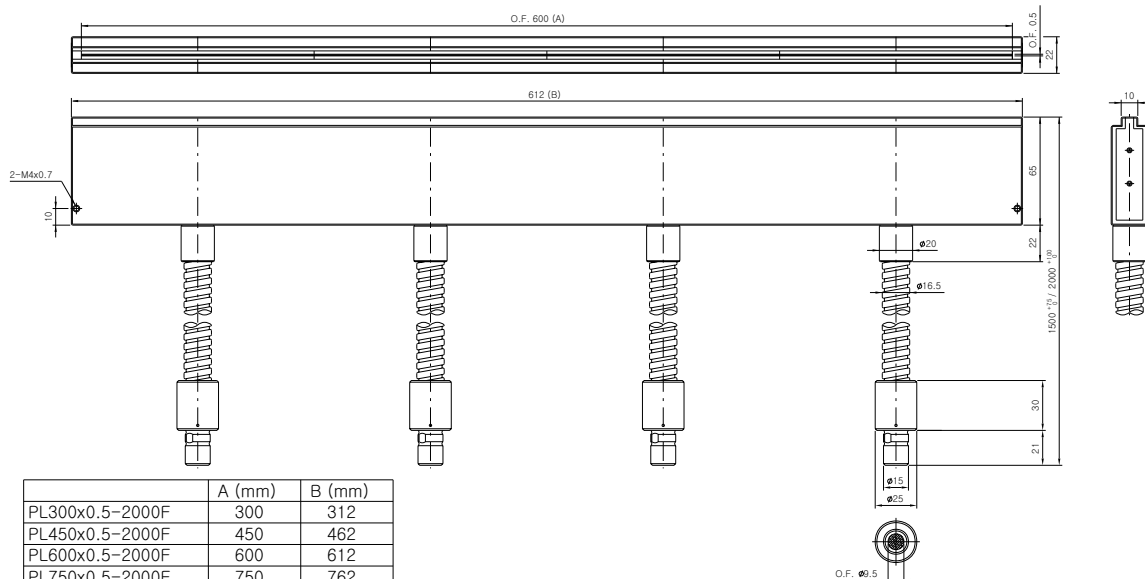
PL180x0.5-1500F
PL180x0.5-2000F

Min. Bending Radius 40

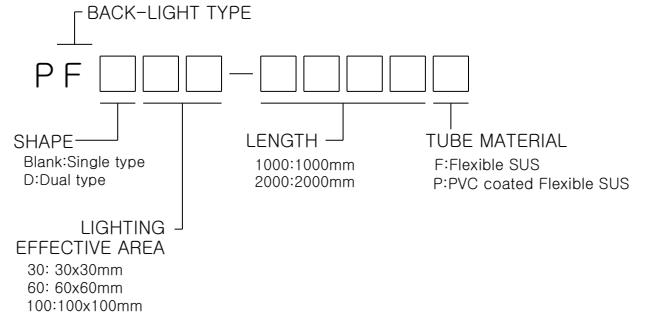


PL600x0.5-1500F
PL600x0.5-2000F

Min. Bending Radius 40

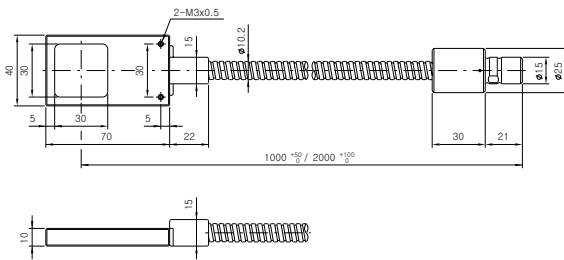


	A (mm)	B (mm)
PL300x0.5-2000F	300	312
PL450x0.5-2000F	450	462
PL600x0.5-2000F	600	612
PL750x0.5-2000F	750	762



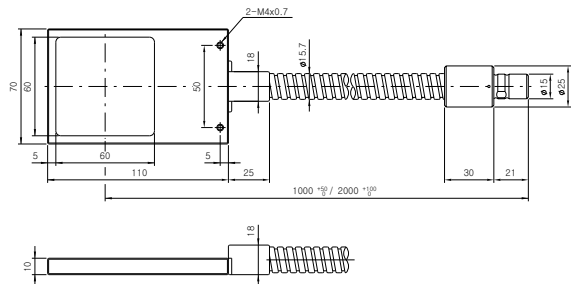
PF30-1000F
PF30-2000F

Min. Bending Radius 30



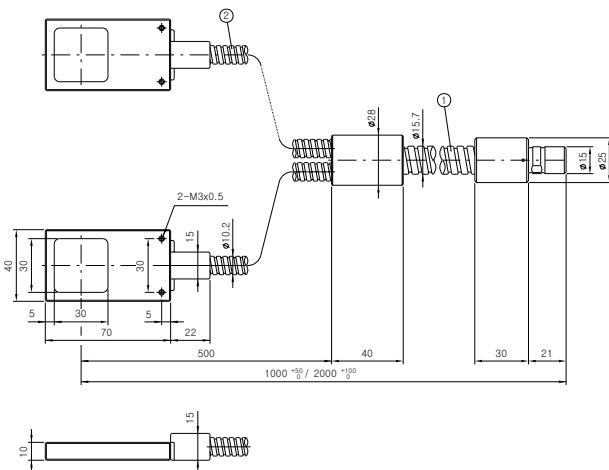
PF60-1000F
PF60-2000F

Min. Bending Radius 35



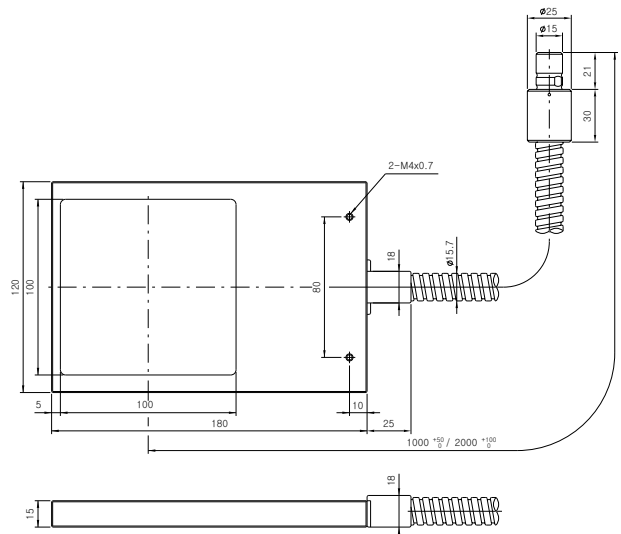
PFD30-1000F
PFD30-2000F

① Min. Bending Radius 35
② Min. Bending Radius 30



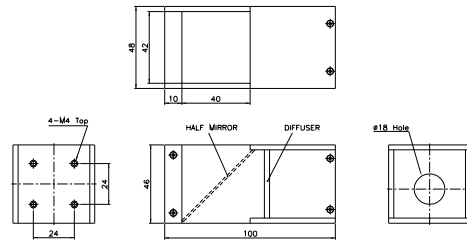
PF100-1000F
PF100-2000F

Min. Bending Radius 35

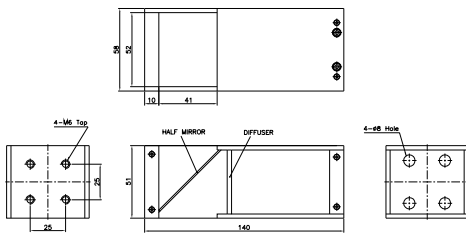




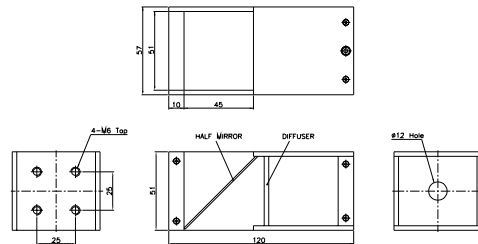
FDL-42/S



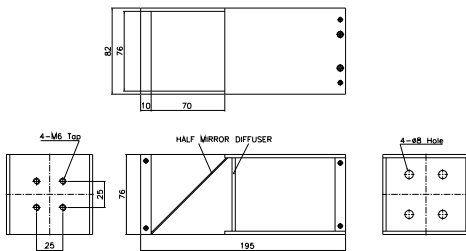
FDL-52/4B



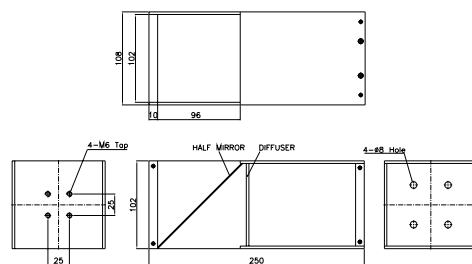
FDL-51/S



FDL-76/4B

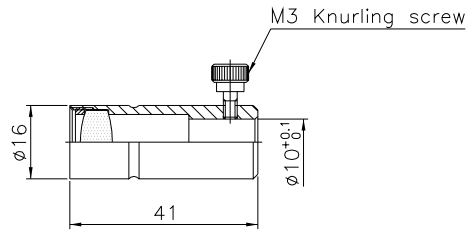


FDL-102/4B

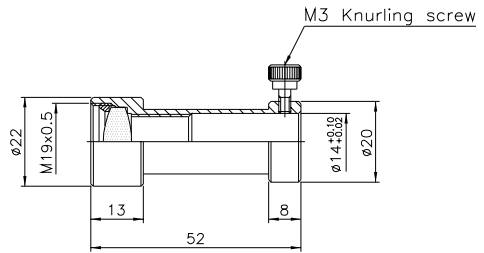




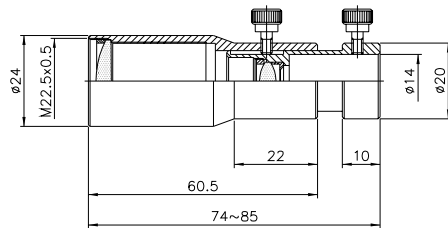
AL-14



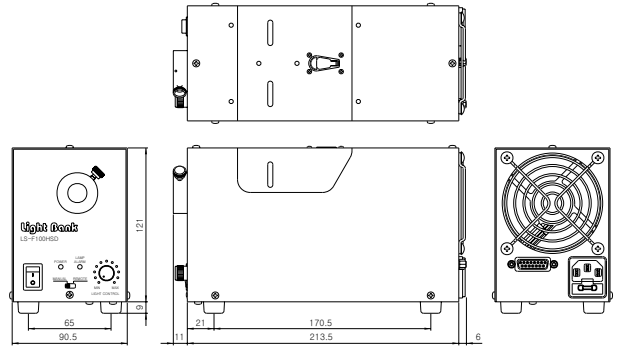
AL-17



AL-220



LS-F100HS Series



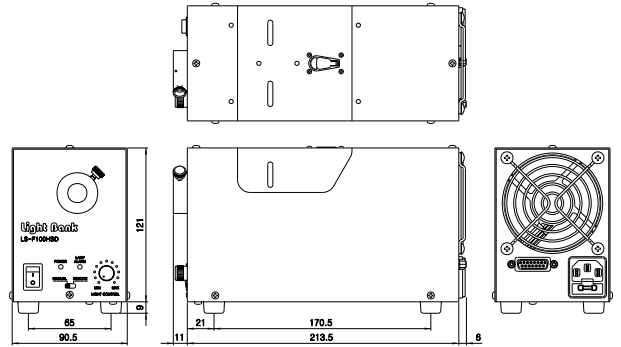
LS-F100HS Series 기능 및 용도

- 내부온도 상승시 자동 전원 차단(70 °C)
- Remote Control 사용가능(LS-F100HSD, LS-F100HSE, LS-F100HSF, LS-F100HSG, LS-F100HSM,LS-F100HSR)
- 미려한 디자인, 사용에 편리한 구조로 설계
- 일반 조명, 반도체 검사조명 등에 사용

Model	LS-F100HS Series
Power Supply	AC 90~130V/180~250V 50/60Hz Auto select
Power Consumption	135W Max.
Lamp	Halogen Lamp 12V 100W OSRAM #64637
Lamp Service Life	1,500Hr Max. at Full range
Intensity of Illumination	About 50,000Lux (Use Light Guide GS6-1000F)
Light Intensity Control	0 ~ 100%
Color Temperature	3,100 K
Operating Temperature	0 ~ 40 °C (20~ 80%RH)
Fuse	AC 250V 3A
Dimensions	90 X 131 X 230
Weight	2.0 Kg

Model	LS-F100HS	LS-F100HSD	LS-F100HSE	LS-F100HSF	LS-F100HSG	LS-F100HSM	LS-F100HSR
외부 ANALOG 조광	X	X	X	O	O	X	O
외부 DIGITAL 조광	X	O (8 Bit)	X	X	X	O (RS-232C)	X
외부 VOLUME 조광	X	X	O	O	X	X	O
외부 ON / OFF	X	O	O	O	O	O	X
LAMP 끊어짐 감지신호	X	O	X	O	X	X	X
LAMP 과전류 감지신호	X	X	X	O	X	X	X
내부 온도상승 감지신호	X	X	X	O	X	X	X

O : 표준 장착 X : 장착 불가



LS-F150HS Series 기능 및 용도

- 내부온도 상승시 자동 전원 차단(95 °C)
- Remote Control 사용가능(LS-F150HSD, LS-F150HSE, LS-F150HSG, LS-F150HSM, LS-F150HSR)
- 미려한 디자인, 사용에 편리한 구조로 설계
- 일반 조명, 반도체 검사조명 등에 사용

Model	LS-F150HS Series
Power Supply	AC 90~130V/180~250V 50/60Hz Auto select
Power Consumption	200W Max.
Lamp	Halogen Lamp 21V 150W EKE
Lamp Service Life	200Hr Max. at Full range
Intensity of Illumination	About 90,000Lux (Use Light Guide GS6-1000F)
Light Intensity Control	0 ~ 100%
Color Temperature	3,250 K
Operating Temperature	0 ~ 40 °C (20~ 80%RH)
Fuse	AC 250V 5A
Dimensions	90 X 131 X 230
Weight	2.1 Kg

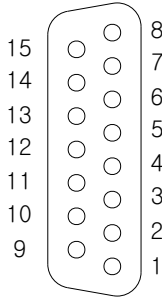
Model	LS-F150HS	LS-F150HSD	LS-F150HSE	LS-F150HSG	LS-F150HSM	LS-F150HSR
외부 ANALOG 조광	X	X	X	O	X	O
외부 DIGITAL 조광	X	O (8 Bit)	X	X	O (RS-232C)	X
외부 VOLUME 조광	X	X	O	X	X	O
외부 ON / OFF	X	O	O	O	O	X
LAMP 끊어짐 감지신호	X	O	X	X	X	X

O : 표준 장착 X : 장착 불가

Connecting Option

LS-F100HS Series, LS-F150HS Series CONNECTOR 접속사양

LS-F100HSD, LS-F150HSD



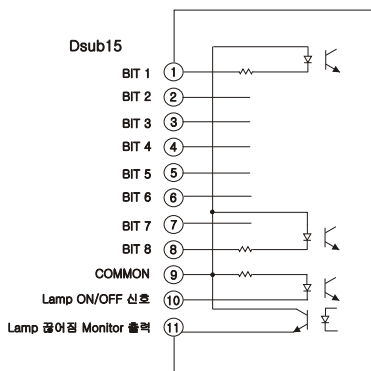
PIN	내 용	PIN	내 용
1	BIT 1 (LSB)	9	COMMON(+5V)
2	BIT 2	10	Lamp ON/OFF 신호입력
3	BIT 3	11	Lamp 끊어짐 Monitor 출력
4	BIT 4	12	NC
5	BIT 5	13	NC
6	BIT 6	14	NC
7	BIT 7	15	NC
8	BIT 8 (MSB)		

LS-F100HSD, LS-F150HSD DIGITAL 접속시의 제어 진리표

Lamp ON/OFF	Lamp Monitor	BIT 8	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	Lamp의 점등
0	0	X	X	X	X	X	X	X	X	OFF Lamp 꺼짐
0	1	X	X	X	X	X	X	X	X	Lamp 끊어짐
1	0	0	0	0	0	0	0	0	1	ON (최소 광량)
1	0	0	0	0	0	0	0	1	0	ON
1	0	0	0	0	0	0	0	1	1	ON (중간 생략)
1	0	1	1	1	1	1	1	1	0	ON
1	0	1	1	1	1	1	1	1	1	ON (최대 광량)

1 : High 상태 0 : Low 상태

LS-F100HSD, LS-F150HSD Remote 기능의 사용방법



- 전면판의 MANUAL/REMOTE switch를 REMOTE쪽으로 위치시킵니다.

MANUAL : 전면판의 VOLUME으로 광량조절
REMOTE : 8 BIT DIGITAL 신호로 광량 조절

- CONNECTOR : HDAB-15S(HRS제품) 및 동등품
CONNECTOR CASE : HAD-CTH(HRS제품) 및 동등품

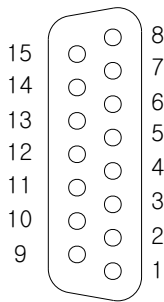
사용시 주의사항

- 1) Lamp 점등은 MANUAL/REMOTE switch에 상관없이 10번 PIN으로 ON/OFF 합니다.
High = LAMP ON
Low = LAMP OFF
- 2) Lamp 끊어짐 출력
정상상태 = Low
이상상태 = High
- 3) 각 접속핀의 과부하를 조심하십시오.

Connecting Option

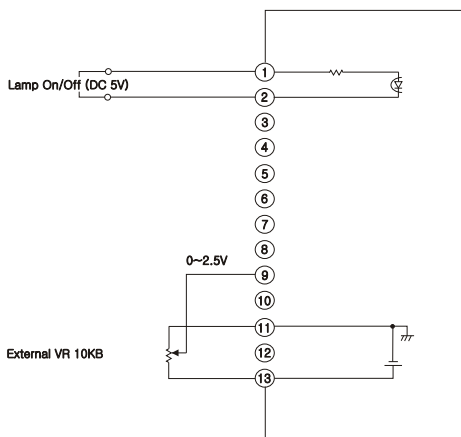
LS-F100HS Series, LS-F150HS Series CONNECTOR 접속사양

LS-F100HSE, LS-F150HSE



PIN	내 용	PIN	내 용
1	Lamp ON/OFF 신호입력	9	10KB 외부 VOLUME
2	Lamp ON/OFF (GND)	10	NC
3	NC	11	GND
4	NC	12	NC
5	NC	13	외부 VOLUME Bias 전원출력(+2.5V)
6	NC	14	NC
7	NC	15	NC
8	NC		

LS-F100HSE, LS-F150HSE Remote 기능의 사용방법



- 전면판의 MANUAL/REMOTE switch를 REMOTE 쪽으로 위치시킵니다.

MANUAL : 전면판의 VOLUME으로 광량조절
 REMOTE : 외부 VOLUME으로 광량조절

- CONNECTOR : HDAB-15P(HRS제품) 및 동등품
 CONNECTOR CASE : HAD-CTH(HRS제품) 및 동등품

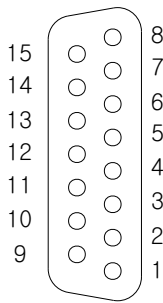
사용시 주의사항

- 1) Lamp ON/OFF 신호 입력은 5V를 사용하십시오.
- 2) Cable은 2m 이내의 실드선을 사용하십시오.
- 3) 각 접속핀의 과부하를 조심하십시오.

Connecting Option

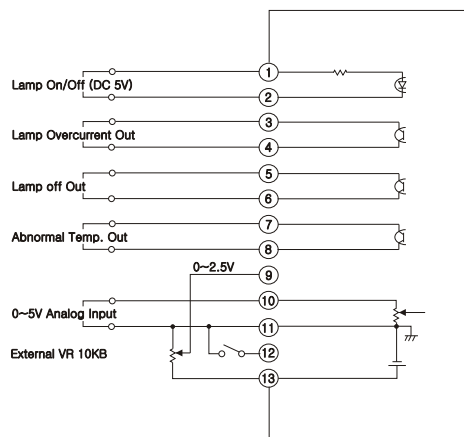
LS-F100HSF CONNECTOR 접속사양

LS-F100HSF



PIN	내 용	PIN	내 용
1	Lamp ON/OFF 신호입력	9	10KB 외부 VOLUME
2	Lamp ON/OFF (GND)	10	0~5V 외부 입력(5V Max.)
3	Lamp 과전류 Monitor (open collector)	11	GND
4	Lamp 과전류 Monitor (open emitter)	12	외부 입력 전압 / VOLUME 전환
5	Lamp 끊어짐 (open collector)	13	외부 VOLUME Bias 전원출력(+2.5V)
6	Lamp 끊어짐 (open emitter)	14	NC
7	온도상승 Monitor (open collector)	15	NC
8	온도상승 Monitor (open emitter)		

LS-F100HSF Remote 기능의 사용방법



- 전면판의 MANUAL/REMOTE switch를 REMOTE 쪽으로 위치시킵니다.

MANUAL : 전면판의 VOLUME으로 광량조절
 REMOTE : 외부입력전압(0~5V), 외부 VOLUME으로 광량조절

- CONNECTOR : HDAB-15P(HRS제품) 및 동등품
 CONNECTOR CASE : HAD-CTH(HRS제품) 및 동등품

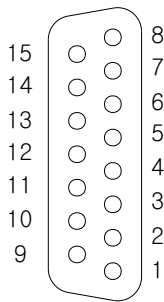
사용시 주의사항

- 1) Lamp ON/OFF 신호 입력은 5V를 사용하십시오.
- 2) Lamp 과전류, Lamp 끊어짐, 온도이상 검지는 DC24V, 30mA 이하의 신호전원을 사용하십시오.
- 3) Cable은 2m 이내의 실드선을 사용하십시오.
- 4) 각 접속핀의 과부하를 조심하십시오.

Connecting Option

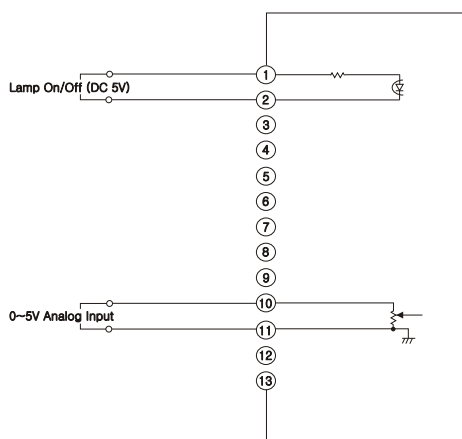
LS-F100HS Series, LS-F150HS Series CONNECTOR 접속사양

LS-F100HSG, LS-F150HSG



PIN	내 용	PIN	내 용
1	Lamp ON/OFF 신호입력	9	NC
2	Lamp ON/OFF (GND)	10	0 ~5V 외부 입력(5V Max.)
3	NC	11	GND
4	NC	12	NC
5	NC	13	NC
6	NC	14	NC
7	NC	15	NC
8	NC		

LS-F100HSG, LS-F150HSG Remote 기능의 사용방법



- 전면판의 MANUAL/REMOTE switch를 REMOTE 쪽으로 위치시킵니다.

MANUAL : 전면판의 VOLUME으로 광량조절
 REMOTE : 외부 ANALOG으로 광량조절

- CONNECTOR : HDAB-15P(HRS제품) 및 동등품
 CONNECTOR CASE : HAD-CTH(HRS제품) 및 동등품

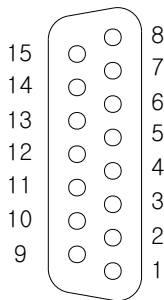
사용시 주의사항

- 1) Lamp ON/OFF 신호 입력은 5V를 사용하십시오.
- 2) Cable은 2m 이내의 실드선을 사용하십시오.
- 3) 각 접속핀의 과부하를 조심하십시오.

Connecting Option

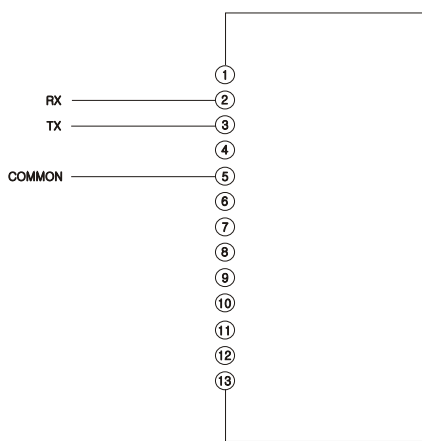
LS-F100HS Series, LS-F150HS Series CONNECTOR 접속사양

LS-F100HSM, LS-F150HSM



PIN	내 용	PIN	내 용
1	NC	9	NC
2	RX	10	NC
3	TX	11	NC
4	NC	12	NC
5	COMMON	13	NC
6	NC	14	NC
7	NC	15	NC
8	NC		

LS-F100HSM, LS-F150HSM Remote 기능의 사용방법



- 전면판의 MANUAL/REMOTE switch를 REMOTE 쪽으로 위치시킵니다.

MANUAL : 전면판의 VOLUME으로 광량조절

REMOTE : RS-232C 통신으로 광량조절

External Light Control : A000 ~ A255

External Lamp On/Off

Lamp ON : C

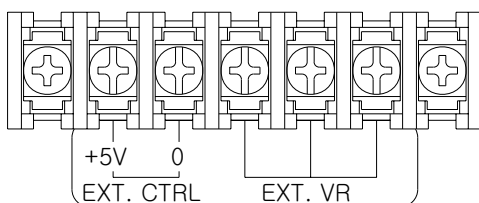
Lamp OFF : B

- CONNECTOR : HDAB-15P(HRS제품) 및 동등품
CONNECTOR CASE : HAD-CTH(HRS제품) 및 동등품

사용시 주의사항

- 1) Lamp ON/OFF 신호 입력은 5V를 사용하십시오.
- 2) Cable은 2m 이내의 실드선을 사용하십시오.
- 3) 각 접속편의 과부하를 조심하십시오.

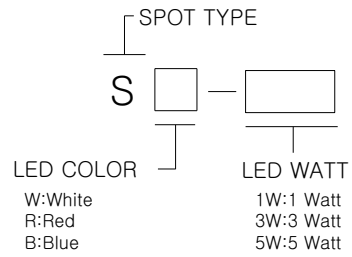
LS-F100HSR, LS-F150HSR



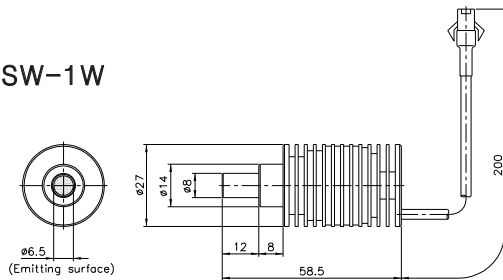
PIN	내 용
1	0 ~ 5V 외부 입력(5V Max.)
2	GND
3	외부 VOLUME 10KB
4	
5	

Spot Light

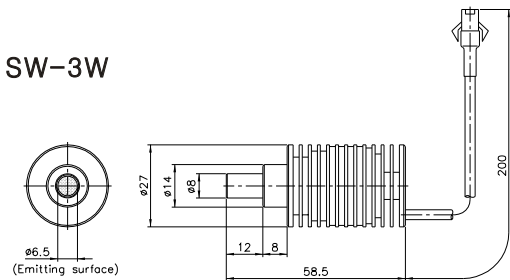
1.3.5W의 고휘도 Power LED를 사용 빛이 고르며 전력소모가 적습니다.



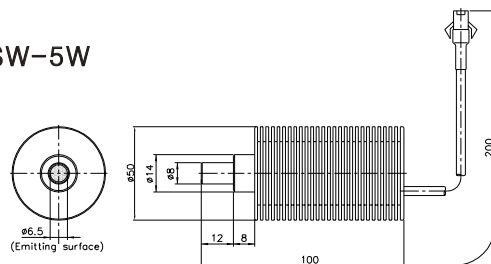
SW-1W



SW-3W

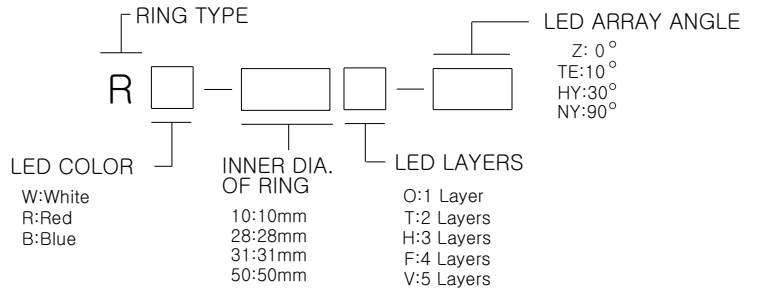


SW-5W

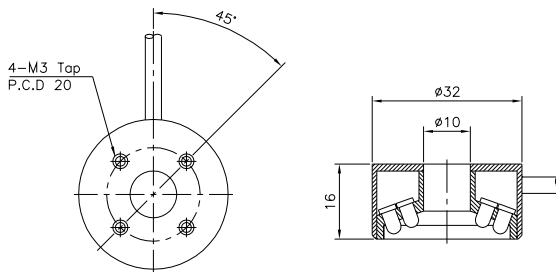


Ring Light

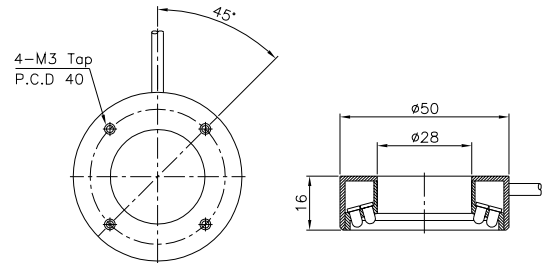
고휘도의 LED가 원형으로 배열되어 조사영역의 중심부에 집중 조명이 가능합니다.



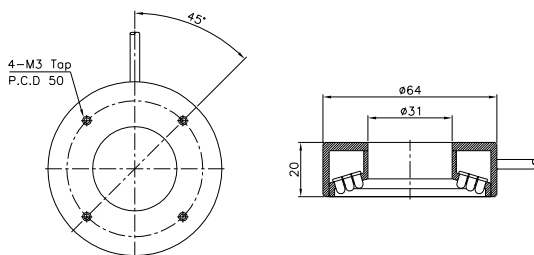
RW-10T-70



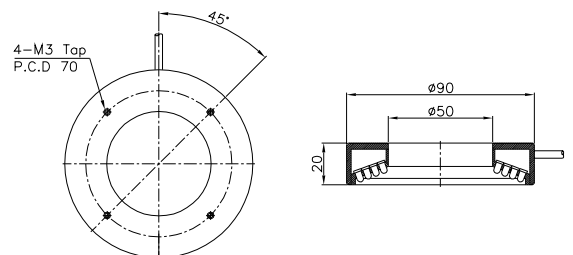
RW-28T-75



RW-31H-80



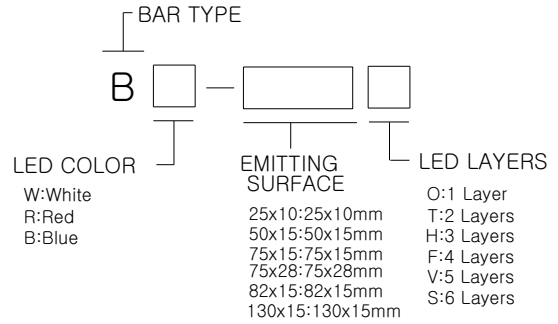
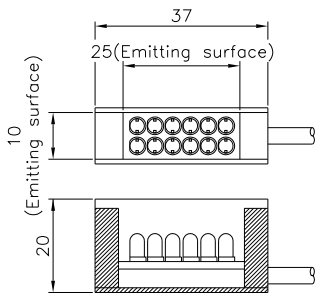
RW-50F-70



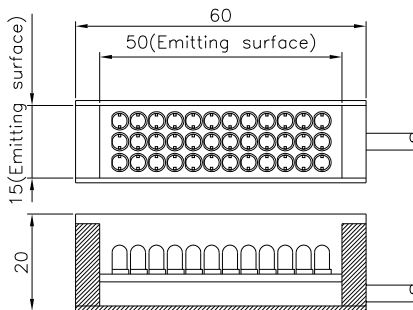
Bar Light

고휘도 LED를 고밀도로 집적하여 사각형 모양으로 다양한 조사각도의 조명 구현이 가능합니다.
LCD검사, LABEL검사, 기타검사용으로 적합합니다.

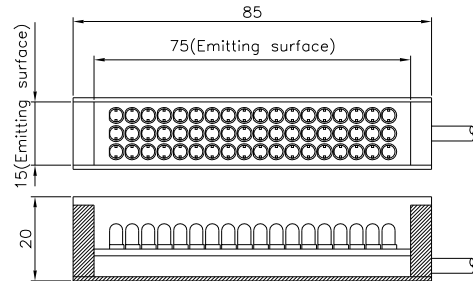
BW-25x10T



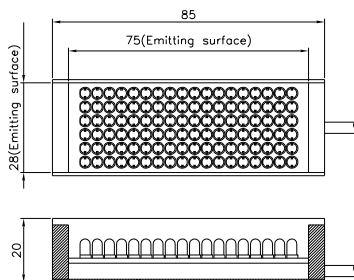
BW-50x15H



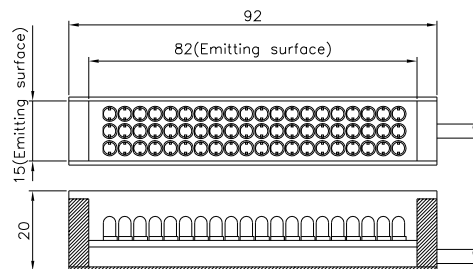
BW-75x15H



BW-75x28S



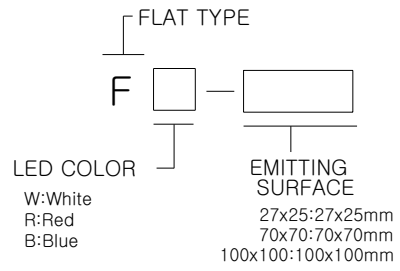
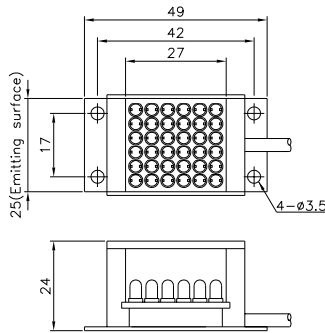
BW-82x15H



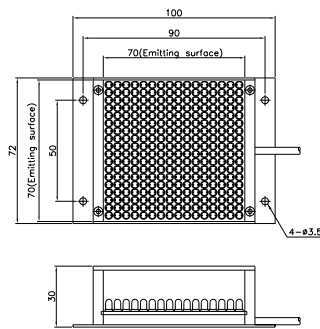
Flat Light

고르게 확산되는 조명으로 물체의 윤곽을 검사하는데 적합합니다.

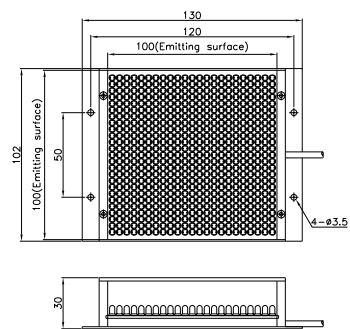
FW-27x25



FW-70x70

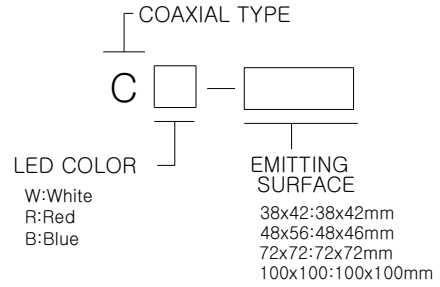


FW-100x100

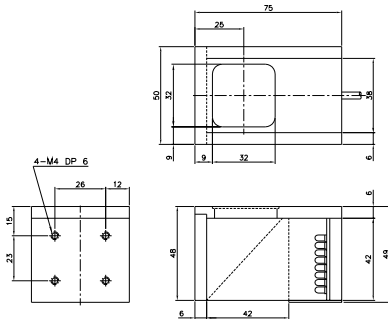


Coaxial Drop Light

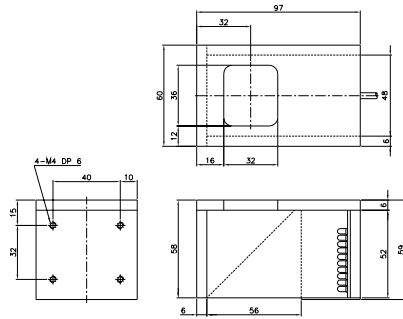
전시야 영역에서 밝고 고른 조명으로 Scratch 검출 작업에 적합합니다.



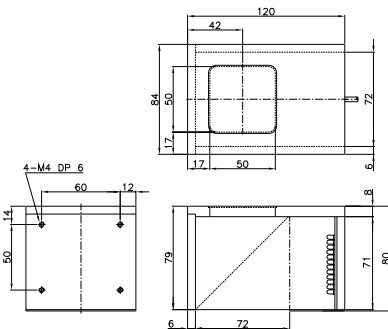
CW-38x42



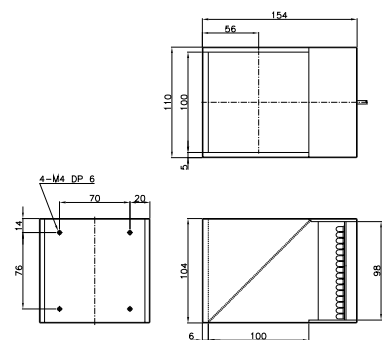
CW-48x56



CW-72x72

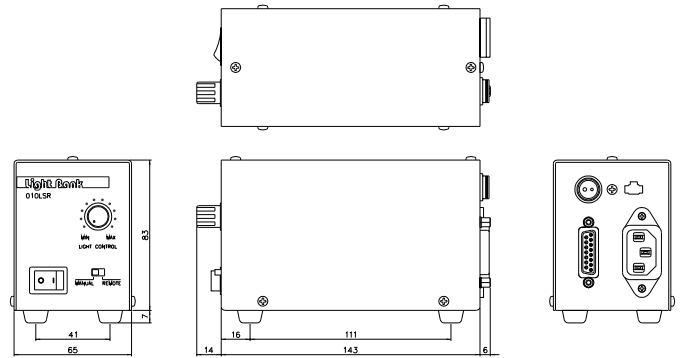


CW-100x100



010LS Series

정전류 제어에 의한 높은 조도 안정성 구현
Remote Control 사용가능(010LSD, 010LSM, 010LSR)
미려한 디자인, 사용에 편리한 구조로 설계
일반조명, 반도체 검사조명 등에 사용

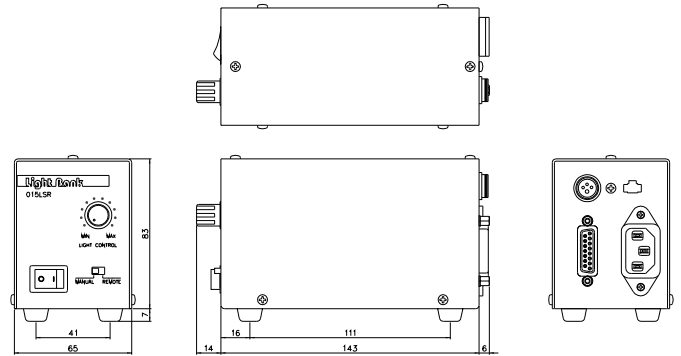


Model	010LS Series
Power Supply	AC 90~130V/180~250V 50/60Hz Auto select
DC Output	5V 0~2A Constant curent control
Light Intensity Control	0 ~ 100%
Cooling Method	Natural cooling
Operating Temperature	0 ~ 40 °C (20~ 80%RH)
Dimensions	65 X 90 X 163
Weight	0.9 Kg

Model	010LS	010LSD	010LSM	010LSR
외부 ANALOG 조광	X	X	X	O
외부 DIGITAL 조광	X	O (8 Bit)	O (RS-232C)	X
외부 VOLUME 조광	X	X	X	O
외부 ON / OFF	X	O	O	X

015LS Series

정전류 제어에 의한 높은 조도 안정성 구현
 Remote Control 사용가능(015LSD, 015LSM, 015LSR)
 미려한 디자인, 사용에 편리한 구조로 설계
 일반조명, 반도체 검사조명 등에 사용



Model	010LS Series
Power Supply	AC 90~130V/180~250V 50/60Hz Auto select
DC Output	24V 0~1A Constant curent control
Light Intensity Control	0 ~ 100%
Cooling Method	Natural cooling
Operating Temperature	0 ~ 40 °C (20~ 80%RH)
Dimensions	65 X 90 X 163
Weight	0.9 Kg

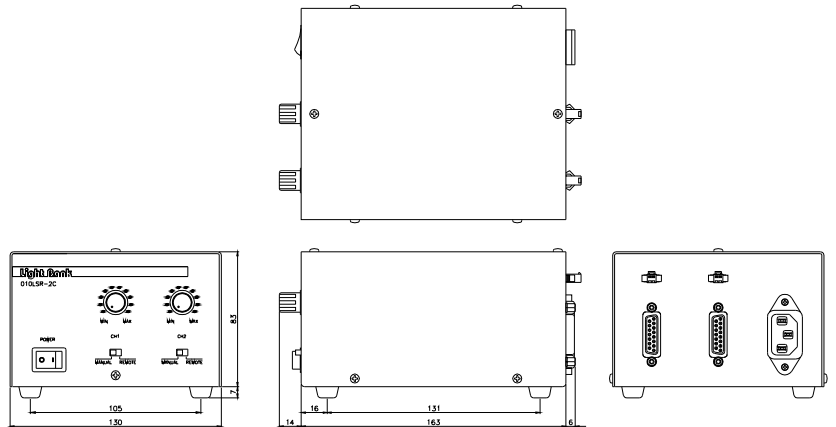
Model	010LS	010LSD	010LSM	010LSR
외부 ANALOG 조광	X	X	X	O
외부 DIGITAL 조광	X	O (8 Bit)	O (RS-232C)	X
외부 VOLUME 조광	X	X	X	O
외부 ON / OFF	X	O	O	X

Multi-channel

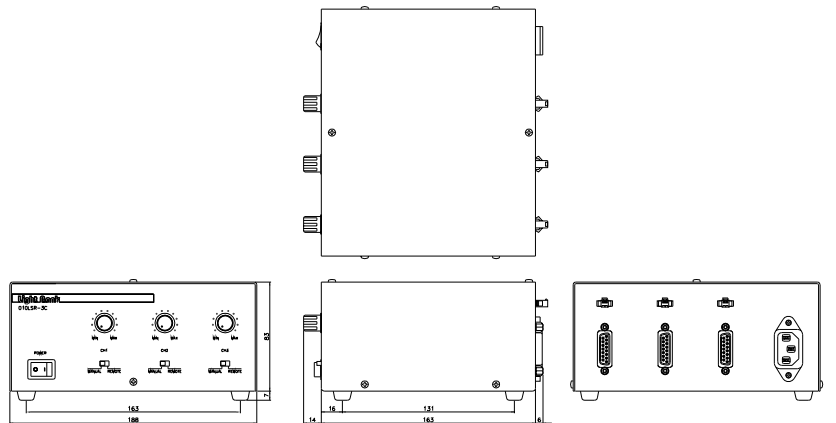
Multi-channel

010LS Series, 015LS Series의 multi-channel LED Power Supply
 010LS Series, 015LS Series의 다양한 Remote Control 사용 가능
 Distributor를 사용할 경우 RS-232C 통신으로 각각의 channel 제어
 정전류 제어에 의한 높은 조도 안정성 구현
 일반조명, 반도체 검사조명 등에 사용

2 channel



3 channel

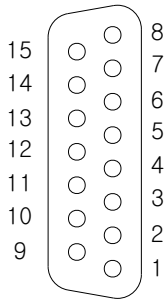


Multi-channel

010LS Series, 015LS Series의 최대 10 channel까지 동시 제어가 가능한 LED Power Supply
 010LS Series, 015LS Series의 다양한 Remote Control 사용 가능
 Distributor를 사용할 경우 RS-232C 통신으로 각각의 channel 제어
 주문제작

Connecting Option

010LSD, 015LSD

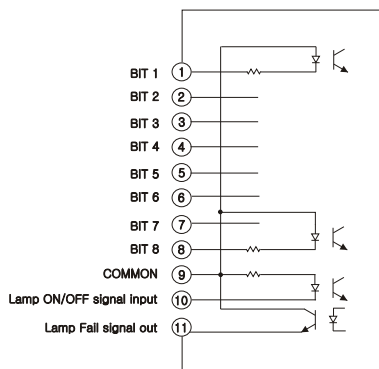


PIN	내 용	PIN	내 용
1	BIT 1 (LSB)	9	COMMON(+5V)
2	BIT 2	10	Lamp ON/OFF 신호입력
3	BIT 3	11	NC
4	BIT 4	12	NC
5	BIT 5	13	NC
6	BIT 6	14	NC
7	BIT 7	15	NC
8	BIT 8 (MSB)		

010LSD, 015LSD 접속시의 제어 진리표

Lamp ON/OFF	BIT 8	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	Lamp의 점등
0	X	X	X	X	X	X	X	X	OFF Lamp 꺼짐
1	0	0	0	0	0	0	0	1	ON (최소 광량)
1	0	0	0	0	0	0	1	0	ON
1	0	0	0	0	0	0	1	1	ON (중간 생략)
1	1	1	1	1	1	1	1	0	ON
1	1	1	1	1	1	1	1	1	ON (최대 광량)

010LSD, 015LSD Remote 기능의 사용방법



- 전면판의 MANUAL/REMOTE switch를 REMOTE쪽으로 위치시킵니다.

MANUAL : 전면판의 VOLUME으로 광량조절
 REMOTE : 8 BIT DIGITAL 신호로 광량 조절

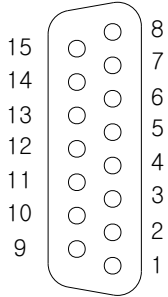
- CONNECTOR : HDAB-15S(HRS제품) 및 동등품
 CONNECTOR CASE : HAD-CTH(HRS제품) 및 동등품

사용시 주의사항

- 1) Lamp 점등은 MANUAL/REMOTE switch에 상관없이 10번 PIN으로 ON/OFF 합니다.
 High = LAMP ON
 Low = LAMP OFF
- 2) 각 접속핀의 과부하를 조심하십시오.

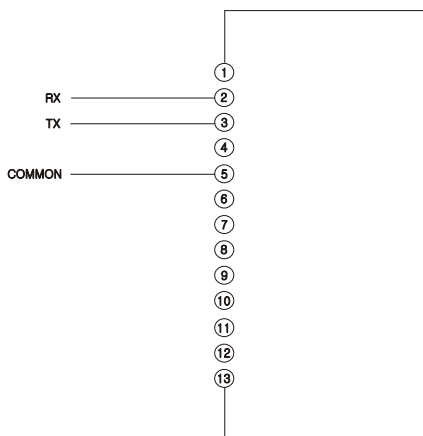
Connecting Option

010LSM, 015LSM



PIN	내 용	PIN	내 용
1	NC	9	NC
2	RX	10	NC
3	TX	11	NC
4	NC	12	NC
5	COMMON	13	NC
6	NC	14	NC
7	NC	15	NC
8	NC		

010LSM, 015LSM Remote 기능의 사용방법



- 전면판의 MANUAL/REMOTE switch를 REMOTE쪽으로 위치시킵니다.

MANUAL : 전면판의 VOLUME으로 광량조절
 REMOTE : RS-232C 통신으로 광량 조절
 External Light Control : A000~A255
 External Lamp ON/OFF
 Lamp ON : C
 Lamp OFF : B

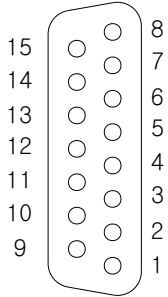
- CONNECTOR : HDAB-15S(HRS제품) 및 동등품
 CONNECTOR CASE : HAD-CTH(HRS제품) 및 동등품

사용시 주의사항

- 1) Lamp ON/OFF 신호 입력은 5V를 사용하십시오.
- 2) Cable은 2m 이내의 실드선을 사용하십시오.
- 3) 각 접속핀의 과부하를 조심하십시오.

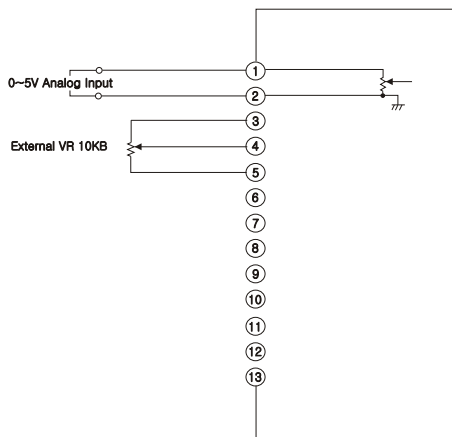
Connecting Option

010LSR, 015LSR



PIN	내 용	PIN	내 용
1	0~5V 외부입력 (5V Max.)	9	NC
2	GND	10	NC
3	외부 VOLUME 10KB	11	NC
4		12	NC
5		13	NC
6	NC	14	NC
7	NC	15	NC
8	NC		

010LSR, 015LSR Remote 기능의 사용방법



- 전면판의 MANUAL/REMOTE switch를 REMOTE쪽으로 위치시킵니다.

MANUAL : 전면판의 VOLUME으로 광량조절
 REMOTE : 외부입력전압(0~5V), 외부 VOLUME으로 광량 조절

- CONNECTOR : HDAB-15S(HRS제품) 및 동등품
 CONNECTOR CASE : HAD-CTH(HRS제품) 및 동등품

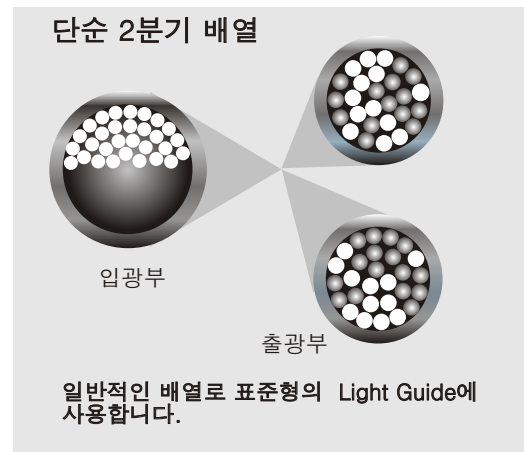
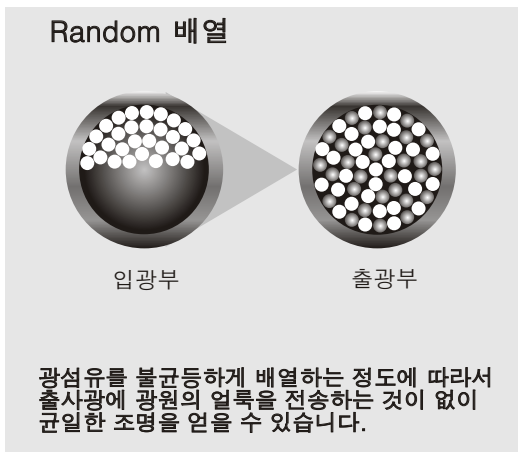
사용시 주의사항

- 1) Cable은 2m 이내의 실드선을 사용하십시오.
- 2) 각 접속핀의 과부하를 조심하십시오.

광섬유 조명장치의 특징

- 열을 전달하지 않으므로 냉광조명이 가능합니다.
- 항상 균일한 고휘도의 조명을 얻을 수 있습니다.
- 광섬유는 전기를 통하지 않는 절연성이 있으므로 방폭성이 있습니다.
- 자유자재로 구부러지므로 빛을 임의의 장소에 용이하게 전달할 수 있습니다.
- 조도의 변동이 작기 때문에 CCD Camera 화상처리용이나 계측용, 검사용 등의 조명에 최적입니다.
- 각종 Lens를 부착하면, 점 조명, 평행광 조명, 선 조명 등의 빛을 손쉽게 얻을 수 있습니다.
- Light Guide의 출광부의 형태에 따라 다양한 조명각도나 형상의 조명을 만들 수 있습니다.
- Color filter 나 편광 filter 를 부착하여 특정파장의 빛을 투과하는 것이 가능하고, 대상물의 판별능력을 향상시킬 수 있습니다.
- 각종 공업시험과 실험의 조명, 현미경의 피사체 조명 등 그림자없는 균일한 조명으로 미세한 시험이 가능합니다.

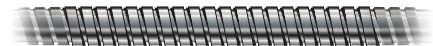
광섬유의 배열



Flexible Tube의 사양

SUS Flexible

녹슬거나 부식이 잘되지 않는 SUS Flexible Tube로 유연성이 좋아 좁게 들어가는 한정된 곳 등에 최적입니다.



SUS Flexible / PVC 피복

SUS Flexible Tube에 튼튼한 폴리염화비닐을 피복한 Tube로서 기구물과의 접촉도에 꼼꼼히 마무리하여 방수성, 방자기성이 우수합니다.



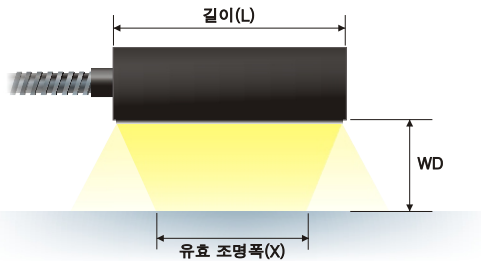
SUS Interlock

구부러진 위치 그대로 고정이 되는 Tube로 표준형은 고정이 되는 정도를 고려하여 Tube 길이는 최대 700mm로 되어 있습니다.



Characteristics

Line Type Light Guide의 조도특성

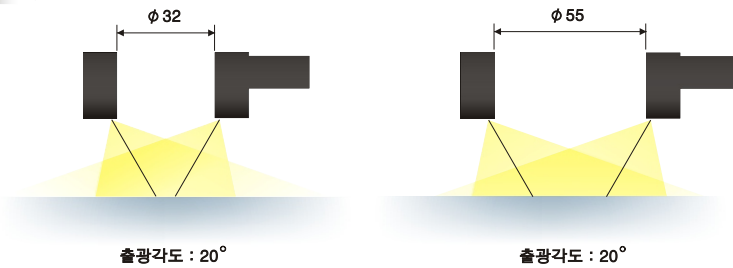


Line Type Light Guide는 조명대상물과의 거리에 따라서 유효조명폭이 변합니다.

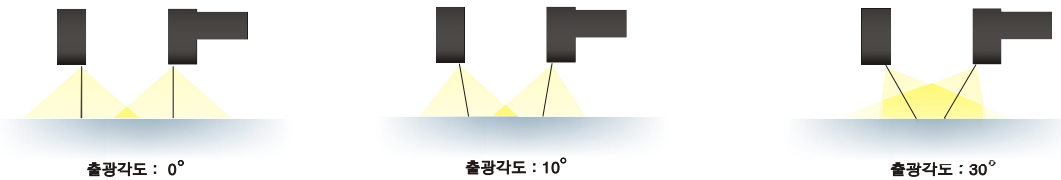
$$X = L - 0.9 \times WD$$

Ring Type Light Guide의 출사각 예

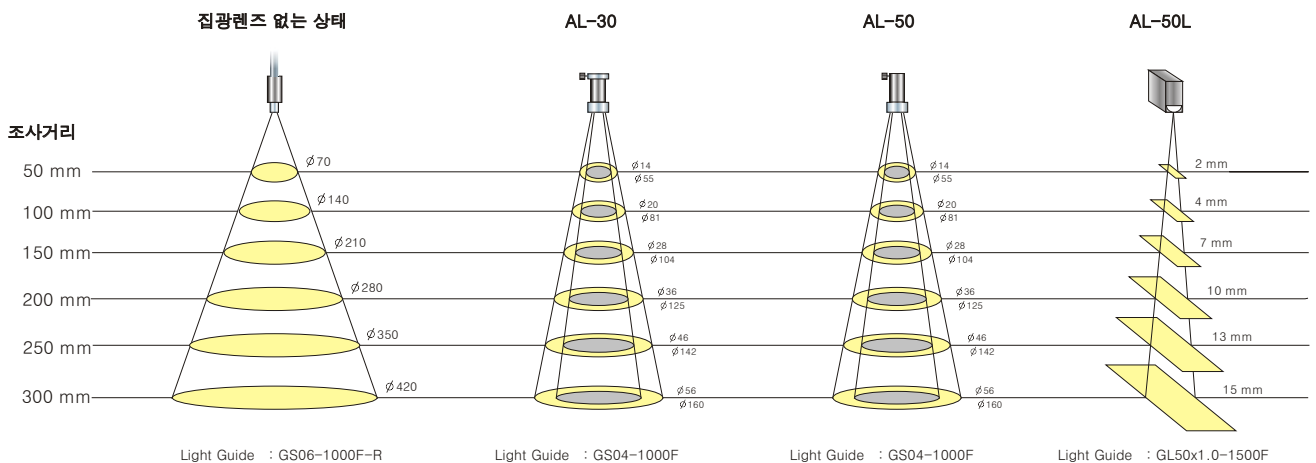
표준형



주문형 (특수내향각)



집광렌즈 특성



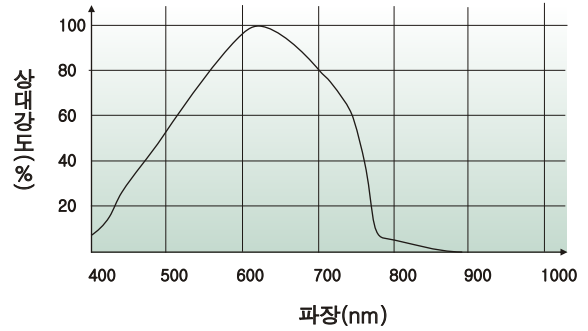
Characteristics

P.O.F 와 G.O.F의 비교 및 특성

P.O.F와 G.O.F의 비교 Data

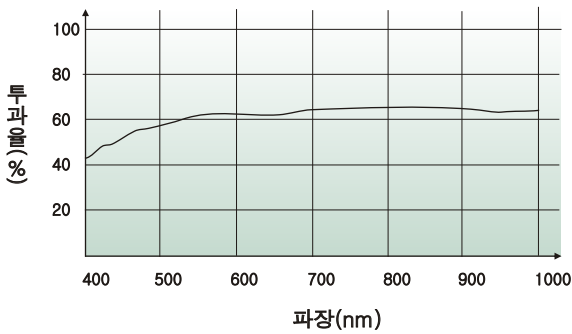
	Glass Optical Fiber (다성분계)		Flastic Optical Fiber	
Fiber 경	50 μ		500 μ	
Core 경	45 μ		486 μ	
내열성	표준형	180 $^{\circ}$ C	표준형	80 $^{\circ}$ C
	특수형	300 $^{\circ}$ C		
출광각도	약 70 $^{\circ}$		약 60 $^{\circ}$	
내굴곡성	△		○	
내열성	○		×	
내약품성	○		×	

Light Guide + Halogen 광원의 분광특성



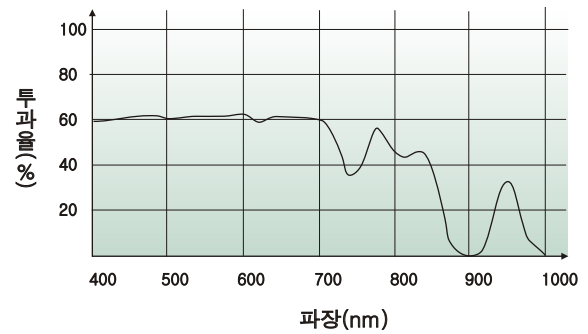
Light Guide (GS5-1000F)
Light Source (LS-F100HS)

Light Guide의 분광투과율(G.O.F)



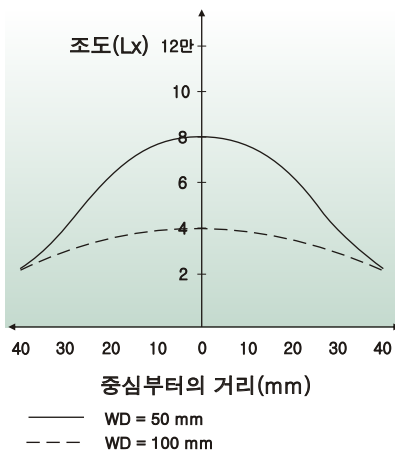
다성분계 Glass Optical Fiber (GS5-1000F)

Light Guide의 분광투과율(P.O.F)



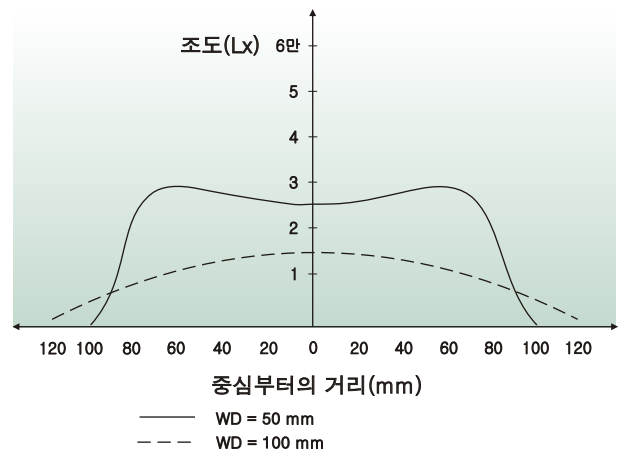
Plastic Optical Fiber (PS5-1000F)

Ring Type Light Guide의 조도분포 예



Light Guide (GR61-1000F)
Light Source (LS-F100HS)

Line Type Light Guide의 조도분포 예



Light Guide (GL180x0.5-1500F)
Light Source (LS-F100HS)