

SR. No.	Yamatake Corporation		製品仕様書 SPECIFICATIONS					
	THROUGH SCAN			POLARIZED RETROREFLECTIVE SCAN	DIFFUSE SCAN LIGHT SOURCE : RED	DIFFUSE SCAN LIGHT SOURCE : INFRARED	SELF-DIAGNOSIS/ SET MODE	OUTPUT
	SET	EMITTER	RECEIVER					
	HPA-T44	HPA-E43	HPA-R44	HPA-P44	—	—	PROVIDED	OPEN COLLECTOR OF
	HPA-T42	HPA-E41	HPA-R42	HPA-P42	HPA-D42	HPA-A42	NOT PROVIDED	PNP TRANSISTOR

HPA-P4*

HPA-D42
HPA-A42

NOTE2
SENSITIVITY ADJUSTMENT

NOTE6

NOTE5
RECEIVER LENS

NOTE5
EMITTER LENS

NOTE5
RECEIVER LENS

NOTE5
EMITTER LENS

NOTE1,3
MOUNTING BRACKET

NOTE7,8
CONNECTOR

8 SCREW THE COUPLING BY HAND
(0.4 TO 0.6N・m {4 TO 6kgf・cm})

7 PLEASE USE THE "PA5" SERIES (DC TYPE) OF OUR VA CONNECTOR.

6 ATTACH THE OPTIONAL ACCESSORY HERE. (HPA-U**)

5 LENS DIAMETER : $\phi 8$

4 MATERIAL
PHOTOELECTRIC SWITCH
CASE PBT RESIN/BLACK
LENS POLYARYLATE RESIN (THROUGH, DIFFUSE SCAN)
PMMA RESIN (POLARIZED RETRO. SCAN)
CONNECTOR PIN BRASS,Au PLATED
MOUNTING BLACKET : Al 11.2

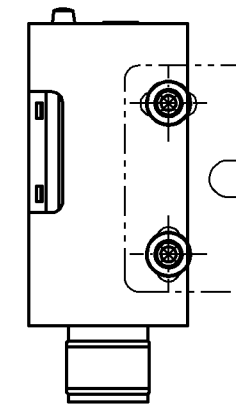
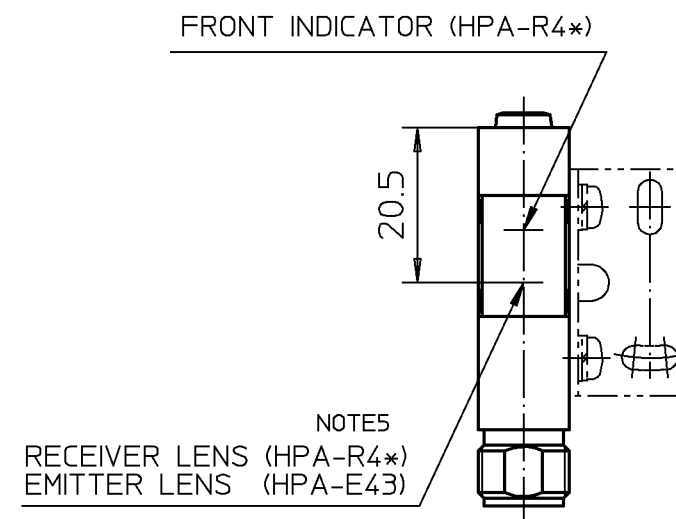
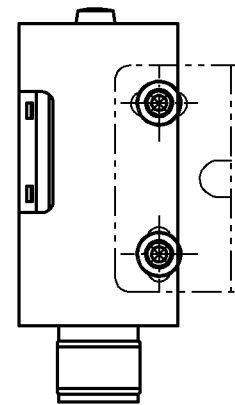
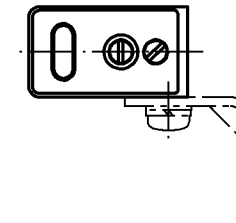
3 MOUNTING BRACKET CAN BE USED ON BOTH SIDE.

2 SCREW DRIVER FOR SENSITIVITY ADJUSTMENT IS INCLUDED.

NOTE 1 MOUNTING BRACKET AND SCREWS ARE INCLUDED.

作成DR T.Koike 2-27 '98	検図CHK. T.Nakao 3-3 '98	認可APPD S.Nonaka 3-4 '98	日付DATE	改番REV.	来歴RECORD	日付DATE	担当BY	検閲APPD.
形番MODEL HPA SERIES			名称NAME PHOTOELECTRIC SWITCH			図番NO. AD41157E		
尺度SCALE 1:1			記入のない公差TOL. UNLESS NOTED $\pm 0.8 \pm 2^\circ$			改番REV. 1/4		

HPA-E43
HPA-R4*



					1. 図取 2-27 '98	1:1	±0.8 ±2°			
					検図CHK. T.Nakao 3-3 '98	形番 MODEL	HPA SERIES			
					認可APPD S.Nonaka 3-4 '98	名称 NAME	PHOTOELECTRIC SWITCH			
					日付DATE	図番 NO.	AD41157E		改番REV	2/4
改番 REV.	来歴 RECORD	日付 DATE	担当 BY	検閲 APPD.						

SR. No.	Yamatake Corporation		製品仕様書 SPECIFICATIONS											
	SET MODE													
	CATALOG LISTING		HPA-T42		HPA-T44		HPA-P42		HPA-P44		HPA-D42		HPA-A42	
	SCANNING TYPE		THROUGH SCAN				POLARIZED RETROREFLECTIVE SCAN				DIFFUSE SCAN			
	SUPPLY VOLTAGE		10 TO 30VDC (RIPPLE 10% MAX.)											
	CURRENT CONSUMPTION		50mA max.(※2) EMITTER:20mA max. RECIEVER:30mA max.				40mA max.(※2)							
	SCANNING DISTANCE		10m				0 TO 4m (REFLECTOR:FE-RR8)				0.2m		0.8m	
	TARGET		OPAQUE MATERIALS MORE THAN ø8				OPAQUE MATERIALS MORE THAN ø80 (REFLECTOR:FE-RR8)				WHITE PAPER(※1) 10X10cm		WHITE PAPER(※1) 20X20cm	
	OPERATING ANGLE		2 TO 20°				SENSOR:1 TO 5° / REFLECTOR:40°min.							
	HYSTERESIS		20% max. OF SCANNING DISTANCE											
OPERARING MODE		'LIGHT ON'/'DARK ON' SELECTIVE (BY MODE SELECTOR)												
OUTPUT MODE		OPEN COLLECTOR OF PNP TRANSISTOR												
OUTPUT		LOAD CURRENT:100mA (RESISTIVE LOAD), OUTPUT WITHSTAND VOLTAGE:30V, SATURATION VOLTAGE:1V max. (AT 100mA LOAD CURRENT) SHORT CIRCUIT PROTECTION												
SELF-DIAGNOSIS OUTPUT (SD OUTPUT)		NOT PROVIDED		PROVIDED		NOT PROVIDED		PROVIDED		NOT PROVIDED				
		LOAD CURRENT:50mA (RESISTIVE LOAD), OUTPUT WITHSTAND VOLTAGE:30V, SATURATION VOLTAGE:1V max. (AT 50mA LOAD CURRENT) SHORT CIRCUIT PROTECTION												
RESPONSE TIME		0.5ms max.				1ms max.				0.5ms max.		5ms max.		
LIGHT SOURCE		RED LED												
INDICATOR		EXCEPT E41 & E43:RED 'ON' WITH RECEPTION OF LIGHT. GREEN 'ON' WITH STABLE LIGHT OR STABLE DARK. GREEN 'BLINK' WITH SELF-DIAGNOSIS E41:RED 'ON' WITH POWER ON. E43:RED 'ON' WITH POWER ON. GREEN 'ON' WITH SET MODE.												
AMBIENT LIGHT		INCANDESENT LIGHT:5000lx max. / SUNLIGHT:20000lx max.												
OPERATING TEMPERATURE		-25 TO +60°C (SET MODE:+5 TO +30°C)												
STORAGE TEMPERATURE		-40 TO +70°C												
HUMIDITY		35 TO 85%RH (WITHOUT CONDENSATION)												
INSULATION RESISTANCE		20MΩ min. (AT 500VDC)												
DIELECTRIC STRENGTH		1000VAC 50/60Hz 1MINUTE												
VIBRATION		10 TO 55Hz 1.5mm DOUBLE AMPLITUDE 2HOURS IN EACH DIRECTION OF X,Y,Z												
SHOCK		500m/s ² (ABOUT 50G) 10TIMES IN EACH DIRECTION OF X,Y,Z												
SEALING		IP67 (IEC STANDAED)												
INSERTION & PULLING FORCE OF CONNECTOR		0.4 TO 4N (0.04 TO 0.4kgf) (PER PIN)												
INSERTION & PULLING CYCLE OF CONNECTOR		50 TIMES min.												
WEIGHT		APPROX.10g												
PROTECTION		FALSE PULSE PROTECTION (100ms typ.) REVERSE POLARITY PROTECTION												
EMC	EN61000-4-2:1995	LEVEL 3												
	ENV50140:1993	LEVEL 3												
	ENV50204:1995	LEVEL 3												
	EN61000-4-4:1995	LEVEL 3												
	IEC255-5:1977	LEVEL 3												
	ENV50141:1993	LEVEL 2												
*1 KODAK GRAYCARD 90%														
*2 APPROX. 30mA INCREASE IN SET MODE														
頁	改番													
改番 REV. 来歴 RECORD 日付 DATE 担当 BY 検閲 APPD.														
作成DR T.Koike 2-27 '98				尺度 SCALE		記入のない公差 TOL. UNLESS NOTED								
検図CHK. T.Nakao 3-3 '98		形 番 MODEL		HPA SERIES										
認可APPD S.Nonaka 3-4 '98		名 称 NAME		PHOTOELECTRIC SWITCH										
日付 DATE		図 番 NO.		AD41157E		改番 REV		3/4						

