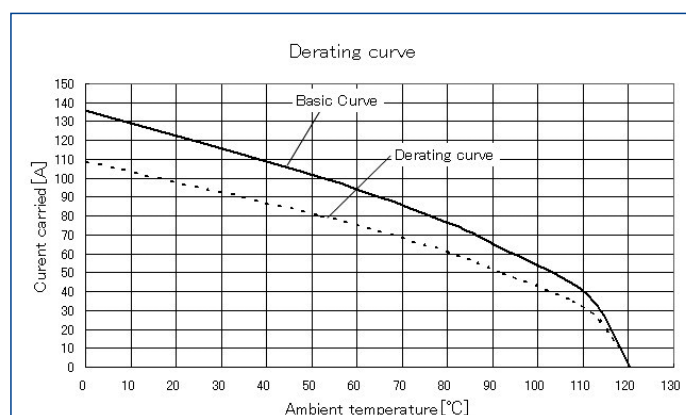
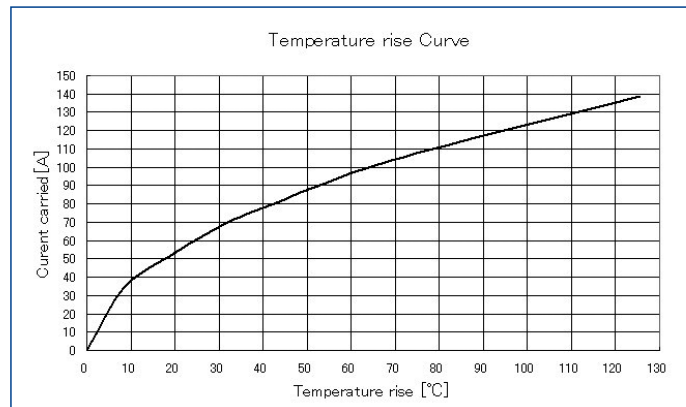


60 Amp Board-to-Board Power Pin Connectors

IT-P Series



Temperature Rise Curve



Features

1. Up to 60Amp/pin current rating.
2. Unique 3-piece structure for flexibility
3. Wide misalignment tolerance ($\pm 0.3\text{mm}$)
4. Paste in hole reflow assembly
5. Stacking heights from 14 to 44mm
6. 12mm pitch pin through - hole
7. Designed to be used/assembled alongside IT3, IT5 and IT7.

Stacking height variations

Stacking Height	14 mm	15 mm	16 mm	17 mm	18 mm	19 mm	20 mm	21 mm	22 mm	23 mm	24 mm	25 mm	26 mm	27 mm	28 mm	29 mm	30 mm	31 mm	32 mm	33 mm	34 mm	35 mm	36 mm	37 mm	38 mm	39 mm	40 mm	41 mm	42 mm	43 mm	44 mm
	✓	*	*	*	*	*	*	✓	✓	✓	✓	✓	✓	*	*	*	*	*	*	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

*Under development / planned

Product Specification

Ratings	Current Rating	60A / pin * (Temperature rise 30°C max)	Operating temperature range Operating humidity range	-55°C to +85°C (Note 1,2) RH 90% MAX (Note 2,4)
	Voltage Rating	300 V DC/AC	Storage temperature range Storage humidity range	-10°C to +60°C (Note 3) RH 70% MAX (Note 3,4)

Item	Specification	Condition
1. Insulation resistance	1000MΩ min.	Measured at DC 500V
2. Withstanding voltage	No flashover and insulation breakdown	AC 1000V for one minute
3. Contact resistance	2 mΩ MAX (Note 5)	100 mA
4. Vibration resistance	No electrical discontinuity of 1 μs or more No damage, crack or looseness of parts	Frequency : 50 to 2000 Hz power spectral density : 0.1 g ² /Hz for 90 minutes in three directions
5. Cyclic temperature and humidity	Contact resistance : 2 mΩ max. (Note 5) No damage, crack or looseness of parts	25 °C, 80% RH: 60 min dwell time 30 min ramp time 65 °C, 50% RH: 60 min dwell time under 24 cycles
6. Durability (Mating / Unmating)	contact resistance : 2 mΩ max. (Note 5) no damage, crack or looseness of parts	100 cycles

Note 1: Include temperature rise caused by current-carrying.

Note 2: Operating temperature should be -55 to 55°C when humidity exceeds 80% RH.

Note 3: "Storage" means a long-term storage state for the unused product before assembly to PCB.

Note 4: No dew condensation is permitted.

Note 5: The value of contact resistance includes 2 contact points and the bulk resistance.

Note 6: *Current rating of IT-PA-2P-14H(11) is 40A. (see the details on page 6)

Note 7: *Current rating of IT-P-2P-14H is 50A. (see the details on page 6)

Material

Product	Part	Material	Finish	Remarks
Receptacle	Housing (Latch-Mounting Side)	LCP	Black color	UL94V-0
	Housing (Detachable Side)	LCP	Gray color	UL94V-0
	Contact	Copper Alloy	Gold plated	—
	Shell	Brass	Silver plated	—
Interposer	Housing	PBT	Black color	UL94V-0
	Contact	Copper Alloy	Silver plated	—

Note 1: Materials shown are for standard product. Other versions are available or in design.

Please contact HIROSE for more information.

Ordering Information

Please use the ordering information when identifying the specification of the product based on the numbering.

Please select a product based on the ordering information described on page 4 to 8 of this catalogue when ordering.

● Receptacle

IT-P ** - 2 S - DIR ** ()**

① ② ③ ④ ⑤ ⑥ ⑦

● Interposer

IT-P ** - 2 P - ** H ** ()**

① ② ③ ④ ⑧ ⑥ ⑦

① Series name: IT-P Receptacle Type ② Blank :Receptacle for housing-free interposers A :Narrow type Receptacle D :Detachable Receptacle D* :Detachable Receptacle(Customized) M :Latch - Mounting Receptacle M* :Latch - Mounting Receptacle(Customized) Interposer Type A :Interposer for narrow type receptacle Blank :Standard ** :Customized	⑥ Packaging or Other Specification Blank :Standard L :Low height receptacle ** :Customized
③ Contact Positions : 2 ④ Connector type S: Receptacle P: Interposer ⑤ DIR : Paste in hole (PIH) reflow.	⑦ Material and Plating Specification ·Receptacle Blank:Standard ** :Customized ·Interposer Blank :Brass, Contact plating(silver 5.1um + Ni 1.5um) (11) :ETP Copper, Contact plating(silver 5.1um + Ni 1.5um)
	⑧ Stacking Height(mm) 14, 16, 18, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43 *19mm and above heights are designed for +1mm use, for example 19mm is used for 19mm and 20mm application

■Receptacle (Pin Through-Hole)



*Unit: mm

Part No.	HRS No.	No. of contacts
IT-PD-2S-DIR	636-0601-0 00	2
IT-PM-2S-DIR	636-0600-7 00	2

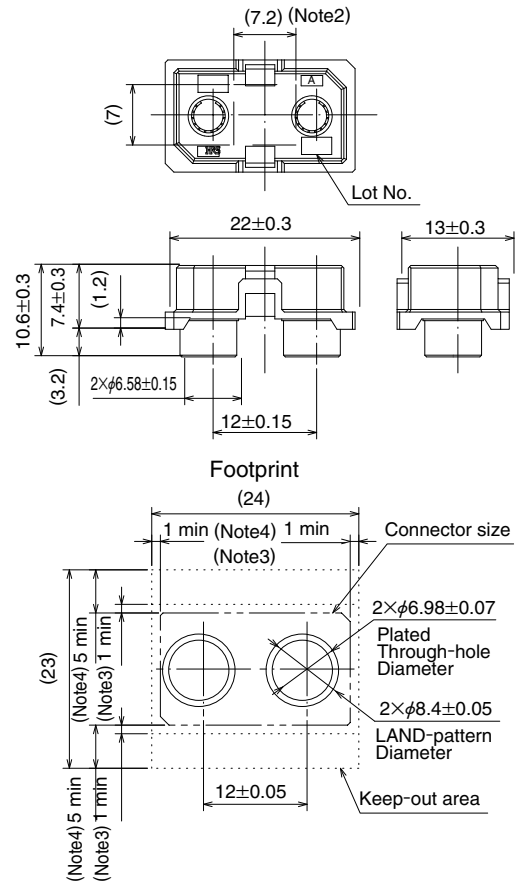
(Note 1) 250 pieces packaged per reel.

(Note 2) This area is vacuum pickup area.

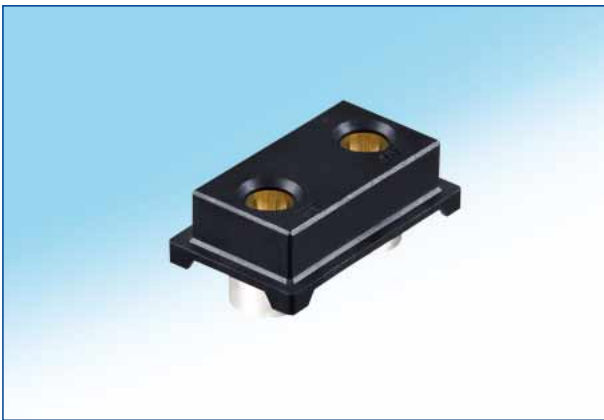
(Note 3) Minimum clearance area.

(Note 4) Recommended clearance for area for insertion / extraction.

(Note 5) Please see page 6 for applicable Interposers.



■Receptacle (Pin Through-Hole)



*Unit: mm

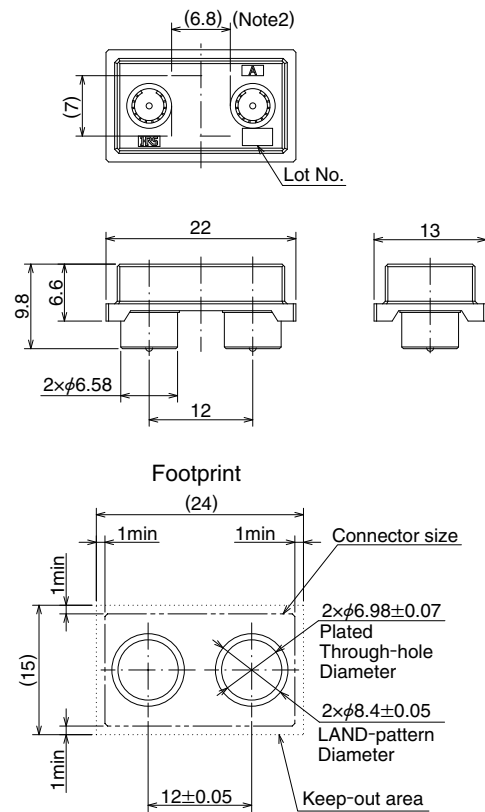
Part No.	HRS No.	No. of contacts
IT-P-2S-DIRL	636-0611-3 00	2

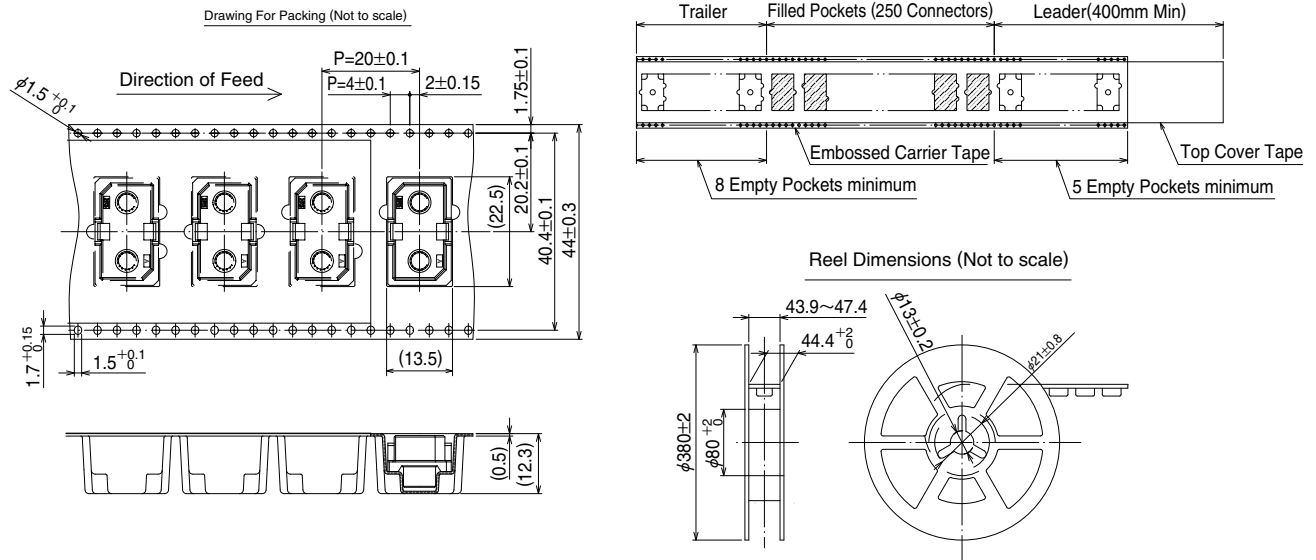
(Note 1) 250 pieces packaged per reel.

(Note 2) This area is vacuum pickup area.

(Note 3) IT-P-2S-DIRL is designed to mate with IT-P-2P-14H(**).

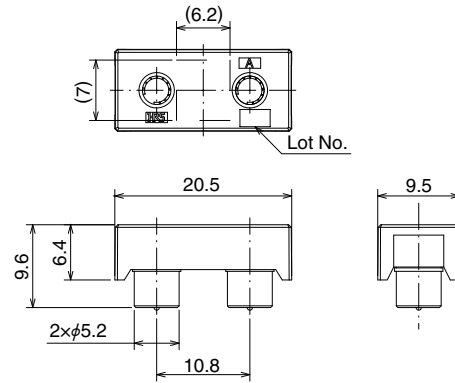
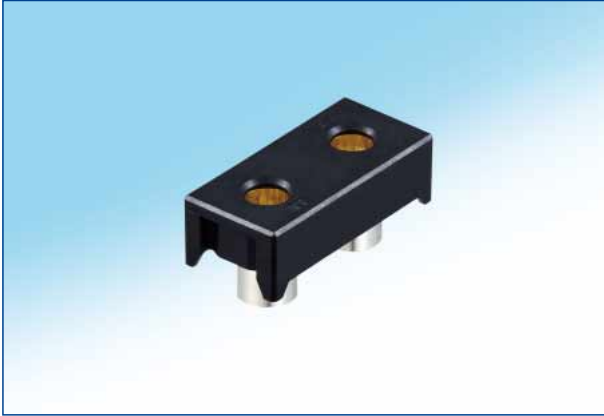
(Note4) Please see page 6 for applicable Interposers.



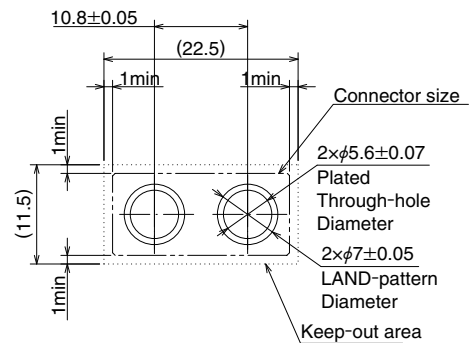


Note: This embossed carrier tape is for IT-PD-2S-DIR, IT-PM-2S-DIR and IT-P-2S-DIRL

■ Receptacle



Footprint



*Unit: mm

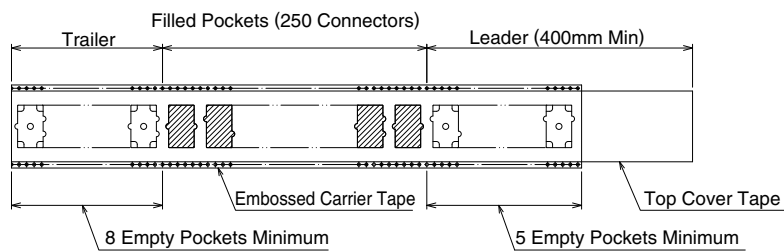
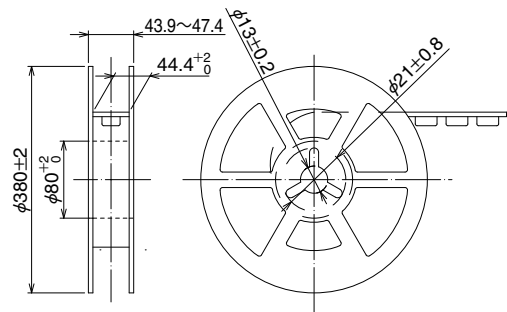
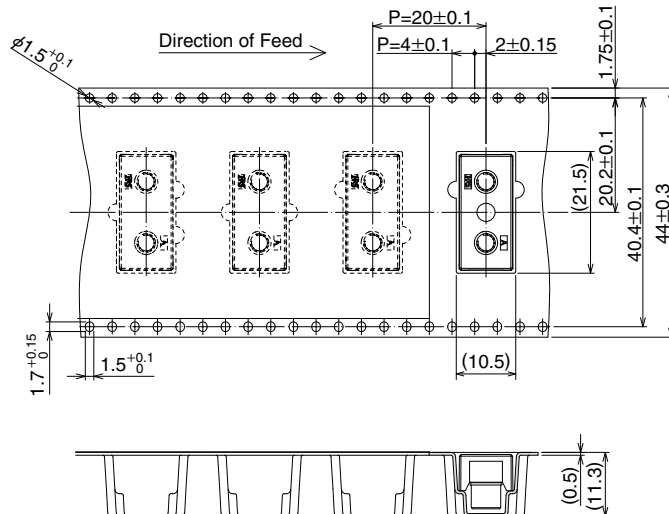
Part No.	HRS No.	No. of contacts
IT-PA-2S-DIRL	636-0614-1 00	2

(Note 1) 250 pieces packaged per reel.

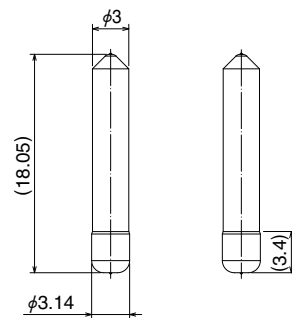
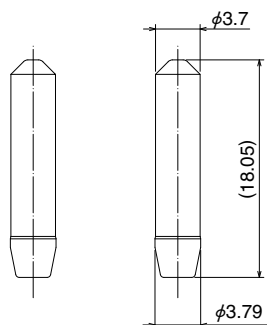
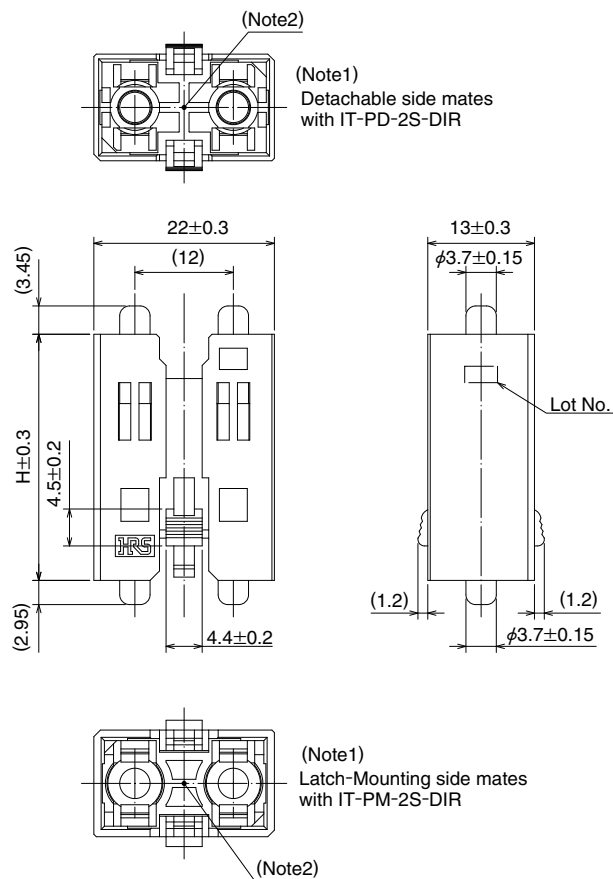
(Note 2) This product has not been released yet. Please contact Hirose Representative for the release schedule.

(Note 3) This product is designed to mate with IT-PA-2P-14H (**). Only.

◆ Embossed Carrier Tape Dimensions



Interposer



*Unit: mm

Part No.	HRS No.	No. of contacts	H	Receptacles	Current Rating
IT-PA-2P-14H(11)	636-0613-9 11	2	-	IT-PA-2S-DIRL	40A
IT-P-2P-14H	636-0609-1 00		-	IT-P-2S-DIRL	50A
IT-P-2P-21H(11)	636-0618-2 11		16.00	IT-PD-2S-DIR / IT-PM-2S-DIR	60A
IT-P-2P-23H(11)	636-0610-0 11		18.00		
IT-P-2P-25H(11)	636-0607-6 11		20.00		
IT-P-2P-35H(11)	636-0602-2 11		30.00		
IT-P-2P-37H(11)	636-0620-4 11		32.00		
IT-P-2P-39H(11)	636-0606-3 11		34.00		
IT-P-2P-41H(11)	636-0619-5 11		36.00		

(Note 1) Mating receptacles are defined for each side of the Interposer.

(Note 2) Product is symmetric along noted axis.

The direction of the mating receptacles is optional.

(Note 3) IT-P-2P-14H (**) and IT-PA-2P-14H (**) are housing-free.

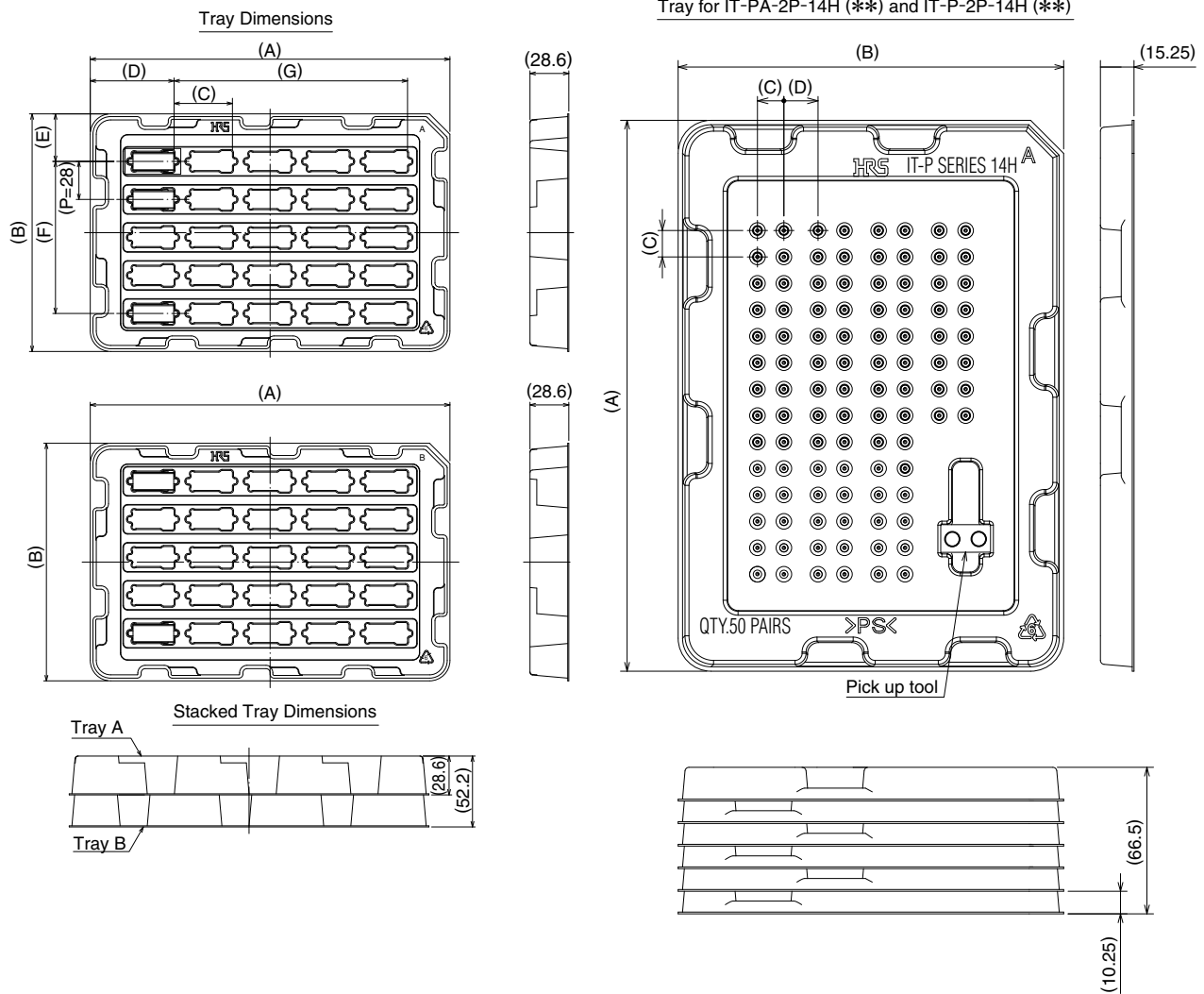
(Note 4) IT-P-2P-14H (**) is designed to mate with IT-P-2S-DIRL.

(Note 5) IT-PA-2P-14H (**) is designed to mate with IT-PA-2S-DIRL only.

(Note 6) IT-P-2P-21H(11), IT-P-2P-37H(11), IT-P-2P-39H(11), and IT-P-2P-41H(11) has not been released yet.

Please contact a Hirose Representative for the release schedule.

Tray Packaging Dimensions



Unit: mm

Part No.	HRS No.	Parts per Tray	Qty per Box	A	B	C	D	E	F	G	
IT-PA-2P-14H(11)	636-0613-9 11	50	500	250	175	10.8	(16.7)	-	-	-	
IT-P-2P-14H	636-0609-1 00					12	(15.5)	-	-	-	
IT-P-2P-21H(11)	636-0618-2 11		150	355	255	33	52	49	155	264	
IT-P-2P-23H(11)	636-0610-0 11						56	42.25			
IT-P-2P-25H(11)	636-0607-6 11					25	43	61.75	35	112	172
IT-P-2P-35H(11)	636-0602-2 11	40	120	355	255	47	78	47	168	235	
IT-P-2P-37H(11)	636-0620-4 11									250	
IT-P-2P-39H(11)	636-0606-3 11					50	71.5	46.6	168		
IT-P-2P-41H(11)	636-0619-5 11										

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