Write date		JUN. 05,2023				<i>A</i> B.A	Cha	Dana	Penort Item nam		nama		TACT SWITCH		
Write No.					4M Change R			repo	report liening			I	NT-1102S series		
		Marit	ex		■ Report □ QM check □ ISIR approval Code						)		160gf, 130gf		
		<u> </u>	□Р	revent defect								ss 🗆	Change	e product Q'ty	
	Reason			reak out facility											
			N												
	Contents			rogress ☐ Change Factory ☐ Change Outsourcing ■ Others (Color)											
	Self-								dicing	■ Other	s (Coloi)				
	qualificatio		o quality change			ty Change	`								
	result		* V6	erified results : \$			data, E i	C (	) 						
				BEFORE						AFTER					
	Part No.			INT-1102S series 160gf, 130gf						S series	160gf, 13	30gf			
	Compone	nt		Case & Stem						Stem					
	Material			PA9T					LCP						
С	- Maker			KURARAY CO.,	LTD / JAF	PAN			POLYPL	ASTICS (	CO.,LTD/	/ JAPAI	N		
H A	- Grade of	f material		G1300H					E130i						
N	- UL rating	g		UL 94HB					UL 94V-0	)					
G	Color				Cas	se	Sten	า			Case		Sten	1	
Е				INT-1102S43AF	Blac	ck	Blac	k	INT-1102	S43AP	Black	(	Blac	k	
_				INT-1102S50AF	Blac	ck	Blac	k	INT-1102	S50AP	Black	(	Blac	k	
С О				INT-1102S50AP	Blad	ck	Ivory	,	INT-1102		Ivory		Ivory	<i>'</i>	
N				(200K LIFE)					(200K LII	FE)					
Т				INT-1102S73AF			Ivory		INT-1102		Black		Blac		
Е				INT-1102S80AF			Blac		INT-1102		Black		Blac		
N	INT			INT-1102S95CF	Blad	ck	Blac	k	INT-1102		Black		Blac		
Т	Reason										_			g flame retardant	
								Has high impact strength from low temperature to high temperature							
									1	3. Has excellent heat resistance and fluidity, high strength					
									4. Has excellent electrical insulation						
									Nater absorption is significantly lower than PA9T						
	Remarks	Remarks				e page	4 for raw	material pr							
				See page 4 for raw material property comparison table of PA9T and LCP.  The new parts will be shipped after the current stock is exhausted.											
				V	/e would I	like to a	sk for appr	oval of the	changed po	oint as ab	ove.				
				Ous	ality accu	iranca i	manager	: 김철	MARY C	EO: =	그 스흥	Ser.			
				Qua	•		•		/		0 0 또				
			1	_	INN	IOCE	NI ELE	TRONI	CŚ CO.,	LID.	T				
	WR			Manager				Check			Арр				
Change Re				Doc No.							App dat	App date			
	Change		I/C	port	Manager				Check						
С	Check	Check Method		☐ Checking cha	inged goods ( ) $\Box$ Check progress			· · · · · · · · · · · · · · · · · · ·				Submit document			
H E	Chook Welliou		-	□ Evaluate doc( ) □ Test for Confirm( ) □ E						TC ( )					
С	Check Result				ge ☐ Don't' Accept ☐ Apply after samp				ple confirm			,		proval doc	
K	Checking	Checking opinion (predictable problen				Tiout				☐ Can usd			」Inspect ∃Inspect	ion standard ion data	
Р								Stock		☐ Can not usd onfrim related dep.			☐ Control plan ☐ Progress ability report ☐ Flow chart		
0									Confrim rela						
N											_		∃ Flow cr ∃ ETC	ıaıt	
Т													(	)	

Write date		JUN. 05,2023			4 N.A	Report Item no		name		TACT SWITCH				
Write No.					4M Change R			tom name		11025 paring 250af				
Customer		Marit	Maritex		■ Report □ QM check □ ISIR approval			Code	е	- ואו	1102S series 250gf			
	Bosson		□Р	revent defect	event defect $\ \square$ Improve quality $\ \blacksquare$ Improve product rate $\ \square$ Revise process $\ \square$ Change product Q'ty									
	Reason		□В	reak out facility	□ Decreasing cost □ Others ( )									
	Contonto			∕lan □ Mach	ine, Facilities	■ Mate	erial, Parts	☐ Method, Co	ondition					
	Contents		□Р	rogress 🗆 C	Change Factory ☐ Change Outsourcing ■ Others (Color)									
	Self-		■ N	lo quality chang										
	qualification result	n	* V	erified results : \$	Sample, Verifie	d data, E	TC (	)						
					BEFORE			AFTER						
	Part No.			INT-1102S serie	es 250gf	INT-1102S series 250gf								
	Compone	nt		Case & Stem				Case & Stem						
	Material			PA9T				LCP						
С	- Maker			KURARAY CO.,	LTD / JAPAN			POLYPLASTIC	S CO.,LTD	/JAPAN				
Н	- Grade of	mate	rial	G1300H				E130i						
A N	- UL rating			UL 94HB			UL 94V-0							
G	Color				Case	Ste	em		Case	•	Stem	1		
Ē				INT-1102S43BF	P Black	RE		INT-1102S43BF		k	lvory	,		
				INT-1102S50BF		RE		INT-1102S50BF			lvory			
С				INT-1102S70BF		RE		INT-1102S70BF			lvory			
O N				INT-1102S73BF		RE		INT-1102S73BF			lvory			
T				INT-1102S80BF		lvo	•	INT-1102S80BF			lvory			
Ē	Decem			INT-1102S85BF	P Black	lvo	гу	INT-1102S85BF			lvory			
Ν	Reason					1. Has UL94V-0 rating even wi					_			
Т					2. Has high impact strength from low temperature						w temp	Derature to mgn		
								3. Has excellent heat resistance and fluidity, high strength						
					4. Has excellent electrical insul						<i>y</i> . •			
								5. Water absorp				than PA9T		
	Remarks	Remarks				See page 4 for raw material property comparison table of PA9T and LCP.								
					The new parts will be shipped after the current stock is exhausted.									
	,													
				V	e would like to a	ask for app	•	changed point as	above.	A.O.Y				
				Qua	ality assurance	manager	: 김철	CEO:	금 승호					
					INNOCE	NT ELE	ECTRONI	CS CO., LTD	•	∿चें				
	WR			Manager			Check			Approval				
	Char	200	Da	nort	Doc No.			-	App da	ite				
	Char	ige	Νt	port	Manager				Check					
С	Check Method		ıd.	☐ Checking changed goods ( )			Check progress ( )					Submit document		
H E			☐ Evaluate doc	( ) 🗆 Test f	or Confirm	nfirm( )□ETC( )				Submit document				
С	Check Result ☐ Accept Char			ge 🗌 Don't' Acce	ept 🗆 App	ply after sam	ple confirm   Po	stpone (	,		proval doc			
K	Checking	Checking opinion (predictable problem			<u>)</u>		Treat	Treat ☐ Can usd			☐ Inspection			
Р							Stock	☐ Can not	t usd			Inspection data Control plan		
0							(	Confrim related de	p.		☐ Progress ability report			
I N											☐ Flow chart ☐ ETC			
Т										[ ]		)		

Write date		JUN. 05,2023			<i>4</i> N/I	Ch	ando E	Poport	lton	Item name		TACT SWITCH		
Write No.					4M Change R			Keport	ILEII			INT-1102T24AP		
Customer Marite		ex	■ Report □ QM check □				ISIR approval	Cod	le		INT-1102ST24BPL			
	Reason		□P	revent defect	☐ Improve qua	Improve prod	duct rate 🔲 Re	vise proc	ess [	☐ Cha	inge product Q'ty			
	Reason		□В	reak out facility   Decreasing cost  Others ( )										
	Contents			fan ☐ Machine, Facilities ■ Material, Parts ☐ Method, Condition										
	Contents		□Р	rogress ☐ Change Factory ☐ Change Outsourcing ■ Others (Color)										
	Self- qualification	0	■ N	o quality change	e   Quality Change									
	result		፠ Ve	erified results:	Sample, Verified	d data, I	ETC (	)						
					BEFORE		AFTER							
	Part No.			INT-1102ST24A	P			INT-1102ST24AP						
				INT-1102ST24B	PL			INT-1102ST24B	PL					
	Compone	nt		Case & Stem				Case & Stem						
С	Material			PA9T				LCP						
Н	- Maker			KURARAY CO.,	LTD / JAPAN			POLYPLASTICS	CO.,LTE	/JAPA	N			
A	- Grade of	mate	rial	G1300H		E130i								
N G	- UL rating	9		UL 94HB				UL 94V-0						
E	Color				Case	St	tem		Cas	е	S	Stem		
												Black		
С	_			INT-1102ST24B	PL Black	lv	ory					/ory		
O N	Reason						1. Has UL94V-0 rating even without adding flame retardant							
T								Has high impact strength from low temperature to high temperature						
Е						3. Has excellent heat resistance and fluidity, high strength						uidity high strength		
N					4. Has excellent electrical insi									
Т				5. Water absorption is significan							intly lower than PA9T			
	Remarks				See page 4 for raw material property comparison table of PA9T and LCP.									
					The ne	w parts	will be shipp	ed after the curre	nt stock i	is exhau	usted.			
				\ \	/e would like to a	sk for ar	onroval of the	changed point as a	hove					
					ality assurance		·	1 ` '			220			
					INNOCE	NT EL	ECTRONI	CS CO., LTD.		* जेंद	)*			
	WR			Manager			Chec	k		Ар	proval			
	Char	200	P۵	nort	Doc No.				App da	date				
	Cilai	ige	1/6	ροιτ	Manager				Chec	k				
С	Check Metho		d	☐ Checking cha	nged goods ( ) $\square$ Check progress			· · · · · · · · · · · · · · · · · · ·			Submit document			
H E				☐ Evaluate doc	( ) ☐ Test for Confirm ( ) ☐ E			ETC ( )						
С				ge   Don't' Accept  Apply after samp			ple confirm			☐ ISIR approval doc				
K	Checking opinion (predictable problen			1		Treat	☐ Can usd			☐ Inspection standard☐ Inspection data				
P O						<u> </u>	Stock	☐ Can not				ntrol plan		
Ī						<u> </u>	C	Confrim related dep	).			gress ability report w chart		
N T											ETC			
l '								<u>[</u>			(	)		

## Raw material property comparison table (원재료 물성 비교표)

	Material na	me (재료명)			
Item (항목)	PA9T (G1300H)		u trackob	Test Standard	
Processing/Physical Characteristics(물리	Value		Unit (단위)	(시험기준)	
적특성)	value	e (m)			
ISO Data					
Molding shrinkage, parallel (성형수축율, 평행)	0.3	0.1	%	ISO 294-4, 2577	
Molding shrinkage, normal (성형수축율, 수직)	1	0.4	%	ISO 294-4, 2577	
Mechanical properties (기계적특성)	Va	lue	Unit (단위)	Test Standard (시험기준)	
ISO Data					
Tensile Modulus (인장탄성률)	9500	16000	MPa	ISO 527	
Stress at break (파단시 강도)	151	160	MPa	ISO 527	
Strain at break (파단시 신율)	1.9	1.6	%	ISO 527	
Charpy notched impact strength, +23°C	44	20	1.172	ICO 170/1 A	
(챠피 노치드 충격 강도, +23°C)	11	38	kJ/m²	ISO 179/1eA	
Thermal properties (열적 특성)	Va	lue	Unit (단위)	Test Standard (시험기준)	
ISO Data					
Melting temperature, 10°C/min (녹는점)	306	335	°C	ISO 11357-1/-3	
Temp. of deflection under load, 1.80 Mpa	290	270	°C	ISO 75-1/-2	
(하중 하에서의 변형 온도 1.80 Mpa)				100 73 1, 2	
Temp. of deflection under load, 8.00 Mpa (하중 하에서의 변형 온도 8.00 Mpa)		216	°C	ISO 75-1/-2	
Coeff. of linear therm. expansion, parallel					
(선형 열팽창 계수, 평행)		7	E-6/K	ISO 11359-1/-2	
Coeff. of linear therm. expansion, normal 선형 열팽창 계수, 수직)		20	E-6/K	ISO 11359-1/-2	
Burning Behav. at thickness h (두께 H인 제품의 난연성)	НВ	V-0	class	IEC 60695-11-10	
UL 94 Flame rating (UL 94 난연등급)	НВ	V-O		UL 94	
Electrical properties (전기적 특성)	Va	lue	Unit (단위)	Test Standard (시험기준)	
ISO Data					
Relative permittivity, 100Hz (상대유전율 100Hz)		4	-	IEC 62631-2-1	
Relative permittivity, 1MHz (상대유전율 1MHz)		3.9	-	IEC 62631-2-1	
Dissipation factor, 100Hz (유정전접 100Hz)		100	E-4	IEC 62631-2-1	
Dissipation factor, 1MHz (유정전접 1MHz)		360	E-4	IEC 62631-2-1	
Volume resistivity (부피저항)		1.00E+13	Ohm*m	IEC 62631-3-1	
Surface resistivity (표면저항)		1.00E+14	Ohm	IEC 62631-3-2	
Electric strength (전기압력)	28	32	kV/mm	IEC 60243-1	
Oxygen index (산소지수로의 난연성)		45	%	ISO 4589-1/-2	
Other properties (기타 특성)	Va	lue	Unit (단위)	Test Standard (시험기준)	
Humidity absorption (흡습성)	0.18	0.03	%	Sim. to ISO 62	
Density (밀도)	1370	1610	kg/m³	ISO 1183	
	.5.0		9/ !!!	.55 1165	