

PTA test plan:

LD-3FG

Ref.	Test	Specification / Procedure	Equipment	Qty	Result	Action plan
1	Function test					
1.01	Lock function operation	Lock function is normal	Manual	5	OK	
1.02	Surface Quality		Visual	5	OK	
1.03	Screw Torque			5	OK	
1.04	Power supply	1.≤3.2V±0.1, red light indicator, laser flashing	Regulator	5	OK	
1.05	Battery level indicator	Battery indicator light shows battery	Visual	5	OK	
1.06	Line width	<3mm@10m	10 meters	5	OK	
1.07	Out of range indication	The laser flashes, 2 times at 2Hz every 3 seconds, and the pulse LED	Action check	5	OK	
1.08	Compensation range	4°±1°	Tilt table	5	OK	
1.09	Leveling time	≤3s	Action check	5	OK	
1.10	Total Current Consumption Mode(mA)	<600mA@3.7V	Regulator	5	OK	
1.11	Laser Line Quality	300lux, 3m Observation at 300lux, 3m without astigmatism, uniform light, no	Visual	50	OK	
1.12	Laser Power	Long axis 0.3-0.6mw, short axis 0.1-	Laser power	50	OK	
1.13	Lock switch fatigue test	>2500cycles	Manual	5	OK	
1.14	Battery cover fatigue test	>2500cycles	Manual	5	OK	
1.15	Charging socket test	>2500cycle	Manual	5	OK	
1.16	Module life time	>500H@50°C	oven	5	OK	
1.17	Discharge time test	Turn on all lasers, the working time is ≥	Manual	12	OK	
1.18	Battery charging test	<8H I _{max} <2A	Manual	12	OK	
1.19	Bleeder current	<10uA	Multimeter	5	OK	
1.21	Wiping test	>1000cycle@alcohol	Manual	5	OK	
2	Accuracy test					
2.01	Horizontal line accuracy	≤±60"		50	OK	
2.02	Vertical accuracy	≤±60"		50	OK	
2.03	Angle accuracy	≤±60"		50	OK	
2.04	Compensation accuracy	≤±70"		50	OK	
3	Reliability test					
3.01	High temperature online work test	After working at 50°C for 2 hours, the accuracy, power and current parameters shall not exceed ±20% of the corresponding values at normal	High and low temperature test room	10	OK	Allowable temperature drift 1.2"/degree
3.02	Low temperature online work test	After working at -10°C for 2 hours, the accuracy, power and current parameters shall not exceed ±20% of	High and low temperature test room	10	OK	Allowable temperature drift 1.2"/degree
3.03	High temperature storage test	Store at 70°C for 16 hours, and test after returning to normal temperature	High and low temperature	10	OK	
3.04	Low temperature storage test	Store at -25°C for 16 hours and test	High and low	10	OK	
3.05	High-low temperature cycle test	50°C and -10°C, 48H alternate cycle	High and low	10	OK	
3.06	High temperature and humidity test	40 °C, 95%, rf 48h humidity life test to verify	High and low temperature	10	OK	
3.07	1m Bare metal drop test	Bare metal 1m, 6 surfaces free fall on	Drop test	10	OK	
3.08	Waterproof test	IP×4	Waterproof	5	OK	

1. Basic Information							
Part Name/ Description	LD-3FG	Samples	5	Test Date	2022.11.29		
2. Test Item				3. Specification / Procedure			
1.01	Lock function operation						
1.02	Surface quality						
1.03	Screw torque			Tighten the screws			
1.04	Battery power			3.7V 3600mAh			
1.05	Battery level indicator						
1.06	Laser line width			≤3mm@10m			
4. Test Record							
unit S/N	1.01 Lock function operation	1.02 Surface quality	1.03 Screw torque	1.04 Battery power	1.05 Battery level indicator	1.06 line width <3mm@10m	
						H	V
FG1114001	✓	✓	✓	✓	✓	3	3
FG1114002	✓	✓	✓	✓	✓	3	3
FG1114003	✓	✓	✓	✓	✓	3	3
FG1114004	✓	✓	✓	✓	✓	3	3
FG1114005	✓	✓	✓	✓	✓	3	3
5. Final Judgment		Pass					
Tested By	王月红、朱小青、侯军		Approved By	侯军			

1. Basic Information															
Part Name	LD-3FG			Samples			5	Test Date	2022.11.29						
2. Test Item								3. Specification / Procedure							
1.07	Out of range indication							The laser line flashes, the indicator light							
1.08	Compensation range							4°±1°							
1.09	Leveling time							≤3s							
1.10	Module-Current consumption mode(mA)							180mA±10%							
1.11	Laser line quality							No astigmatism, uniform light, no breakpoints							
1.12	Laser power							0.3-0.6/long axis, 0.1-0.3/short axis							
1.13	Lock switch fatigue test							4°±1°							
1.14	Battery cover fatigue test							>2500cycles							
1.15	Charging socket fatigue test							>2500cycles							
1.16	Module life time							>2500cycles							
1.17	Discharge time test							Turn on all lasers, the working time is ≥8h							
1.18	Charging time test							<4H I _{max} <2A							
1.19	Bleeder current							<10uA							
1.20	Wipe test							>1000cycle@alcohol							
4. Test Record															
unit S/N	1.07	1.08	1.09	1.10 Module current			1.11	1.12 laser power							
	laser flash	Compensation range	leveling time	H	V1	V2	line quality	H1	H2	H3	H4	front V1	front V2	front V3	front V4
FG1114006	✓	4°	3S	70	66	71	✓	0.471	0.559	0.121	0.138	0.155	0.138	0.604	0.755
FG1114007	✓	4°	3S	69	66	68	✓	0.533	0.593	0.126	0.144	0.156	0.171	0.552	0.536
FG1114008	✓	4°	3S	71	68	66	✓	0.538	0.501	0.129	0.132	0.147	0.141	0.457	0.573
FG1114009	✓	4°	3S	68	71	66	✓	0.499	0.563	0.121	0.146	0.131	0.137	0.541	0.451
FG1114010	✓	4°	3S	66	75	68	✓	0.394	0.583	0.106	0.103	0.101	0.107	0.401	0.459
unit S/N	1.12				1.13	1.14	1.15	1.16	1.17	1.18	1.19	1.20			
	V右1	V右2	V右3	V右4	Lock switch	Battery cover	Charging socket	Module life time	Discharge time	Charging time	bleeder current	Wipe test			
FG1114006	0.157	0.145	0.489	0.547	✓	✓	✓	✓	8:53	4:15	7.91	✓			
FG1114007	0.185	0.168	0.639	0.549	✓	✓	✓	✓	7:45	4:12	8.18	✓			
FG1114008	0.173	0.184	0.459	0.545	✓	✓	✓	✓	8:28	4:09	8.21	✓			
FG1114009	0.131	0.131	0.471	0.483	✓	✓	✓	✓	8:54	4:23	8.56	✓			
FG1114010	0.106	0.097	0.413	0.402	✓	✓	✓	✓	8:59	3:59	8.31	✓			
5. Final Judgment				Pass											
Tested By	王月红、朱小青、侯军			Approved By				侯军							

Model: LD-3FG

Quantity: 50

Date: 2022.11.17

Tester: 王月红、朱小青、侯军

S/N	Number	Voltage (V)	Electric current (mA)	Horizontal (mW)				Vertical (mW)								备注
								Vertical Front				Vertical Right				
				Front	Back	Left	Right	Up	Down	Left	Right	Up	Down	Front	Back	
0	FG1114001	3.7	550	0.403	0.637	0.136	0.126	0.133	0.136	0.449	0.435	0.151	0.224	0.507	0.607	
1	FG1114002	3.7	550	0.619	0.666	0.121	0.145	0.131	0.138	0.536	0.528	0.113	0.163	0.461	0.288	
2	FG1114003	3.7	608	0.492	0.534	0.127	0.142	0.168	0.149	0.549	0.591	0.121	0.146	0.531	0.539	
3	FG1114004	3.7	595	0.552	0.451	0.131	0.128	0.131	0.131	0.446	0.592	0.149	0.128	0.429	0.556	
4	FG1114005	3.7	596	0.431	0.508	0.111	0.128	0.161	0.213	0.546	0.553	0.161	0.148	0.529	0.435	
5	FG1114006	3.7	548	0.471	0.559	0.121	0.138	0.155	0.138	0.604	0.755	0.157	0.145	0.489	0.547	
6	FG1114007	3.7	642	0.533	0.593	0.126	0.144	0.156	0.171	0.552	0.536	0.185	0.168	0.639	0.549	
7	FG1114008	3.7	553	0.538	0.501	0.129	0.132	0.147	0.141	0.457	0.573	0.173	0.184	0.459	0.545	
8	FG1114009	3.7	572	0.499	0.563	0.121	0.146	0.131	0.137	0.541	0.451	0.131	0.131	0.471	0.483	
9	FG1114010	3.7	512	0.394	0.583	0.106	0.103	0.101	0.107	0.401	0.459	0.106	0.097	0.413	0.402	
10	FG1114011	3.7	573	0.466	0.583	0.131	0.122	0.164	0.136	0.141	0.446	0.471	0.197	0.539	0.521	
11	FG1114012	3.7	535	0.444	0.415	0.117	0.146	0.087	0.115	0.384	0.535	0.104	0.131	0.412	0.459	
12	FG1114013	3.7	573	0.591	0.541	0.134	0.141	0.119	0.148	0.461	0.524	0.114	0.111	0.446	0.512	
13	FG1114014	3.7	600	0.544	0.439	0.111	0.124	0.141	0.166	0.512	0.539	0.146	0.122	0.505	0.559	
14	FG1114015	3.7	560	0.566	0.422	0.121	0.141	0.107	0.115	0.445	0.537	0.125	0.131	0.475	0.626	
15	FG1114016	3.7	548	0.603	0.435	0.129	0.146	0.158	0.141	0.554	0.558	0.161	0.136	0.551	0.581	
16	FG1114017	3.7	574	0.423	0.501	0.105	0.101	0.151	0.147	0.487	0.591	0.126	0.159	0.413	0.352	
17	FG1114018	3.7	592	0.532	0.433	0.117	0.132	0.153	0.171	0.616	0.568	0.135	0.121	0.479	0.543	
18	FG1114019	3.7	606	0.545	0.524	0.135	0.139	0.151	0.137	0.446	0.525	0.163	0.54	0.524	0.461	
19	FG1114020	3.7	630	0.604	0.537	0.125	0.132	0.166	0.167	0.447	0.601	0.158	0.169	0.534	0.576	
20	FG1114021	3.7	600	0.466	0.509	0.107	0.129	0.151	0.139	0.616	0.651	0.159	0.138	0.496	0.595	
21	FG1114022	3.7	538	0.503	0.471	0.109	0.122	0.088	0.094	0.368	0.433	0.127	0.133	0.469	0.589	
22	FG1114023	3.7	607	0.514	0.439	0.111	0.128	0.149	0.166	0.485	0.541	0.117	0.149	0.494	0.501	
23	FG1114024	3.7	602	0.414	0.363	0.087	0.109	0.141	0.189	0.542	0.514	0.151	0.132	0.563	0.559	
24	FG1114025	3.7	572	0.517	0.413	0.114	0.106	0.152	0.129	0.404	0.461	0.227	0.145	0.35	0.329	
25	FG1114026	3.7	641	0.521	0.487	0.121	0.111	0.165	0.161	0.545	0.529	0.171	0.109	0.494	0.549	
26	FG1114027	3.7	583	0.504	0.501	0.128	0.114	0.182	0.134	0.626	0.532	0.173	0.125	0.446	0.499	
27	FG1114028	3.7	542	0.485	0.358	0.116	0.121	0.128	0.123	0.525	0.423	0.186	0.137	0.479	0.499	
28	FG1114029	3.7	571	0.491	0.524	0.109	0.121	0.141	0.122	0.489	0.422	0.177	0.119	0.485	0.549	
29	FG1114030	3.7	642	0.507	0.514	0.108	0.119	0.145	0.147	0.544	0.561	0.131	0.132	0.479	0.551	
30	FG1114031	3.7	572	0.504	0.459	0.138	0.128	0.171	0.147	0.671	0.554	0.176	0.131	0.475	0.526	
31	FG1114032	3.7	550	0.566	0.525	0.133	0.131	0.155	0.144	0.513	0.552	0.107	0.143	0.456	0.504	
32	FG1114033	3.7	533	0.459	0.465	0.103	0.096	0.148	0.153	0.561	0.619	0.199	0.128	0.481	0.525	
33	FG1114034	3.7	576	0.439	0.394	0.095	0.106	0.131	0.112	0.564	0.435	0.191	0.126	0.446	0.609	
34	FG1114035	3.7	588	0.457	0.415	0.109	0.115	0.146	0.149	0.481	0.474	0.141	0.114	0.461	0.478	
35	FG1114036	3.7	542	0.588	0.541	0.131	0.134	0.179	0.132	0.396	0.471	0.114	0.111	0.451	0.451	
36	FG1114037	3.7	623	0.428	0.506	0.112	0.117	0.173	0.113	0.552	0.452	0.204	0.133	0.489	0.647	
37	FG1114038	3.7	597	0.552	0.496	0.123	0.138	0.159	0.149	0.622	0.627	0.176	0.131	0.569	0.577	
38	FG1114039	3.7	606	0.474	0.494	0.112	0.112	0.173	0.137	0.485	0.548	0.119	0.156	0.529	0.432	
39	FG1114040	3.7	534	0.401	0.406	0.101	0.101	0.117	0.114	0.453	0.429	0.118	0.126	0.461	0.608	
40	FG1114041	3.7	560	0.485	0.502	0.111	0.112	0.171	0.145	0.546	0.526	0.133	0.143	0.484	0.506	
41	FG1114042	3.7	556	0.467	0.479	0.137	0.141	0.112	0.121	0.401	0.517	0.152	0.119	0.414	0.414	
42	FG1114043	3.7	627	0.484	0.554	0.137	0.147	0.132	0.127	0.538	0.526	0.173	0.188	0.553	0.558	
43	FG1114044	3.7	592	0.509	0.493	0.129	0.137	0.152	0.131	0.523	0.544	0.172	0.119	0.477	0.507	
44	FG1114045	3.7	592	0.434	0.571	0.126	0.134	0.155	0.113	0.532	0.525	0.198	0.148	0.483	0.516	
45	FG1114046	3.7	631	0.467	0.501	0.119	0.133	0.167	0.134	0.524	0.537	0.164	0.136	0.525	0.607	
46	FG1114047	3.7	573	0.475	0.522	0.107	0.131	0.122	0.125	0.502	0.507	0.128	0.142	0.532	0.625	
47	FG1114048	3.7	534	0.486	0.404	0.119	0.128	0.117	0.103	0.421	0.432	0.191	0.135	0.539	0.569	
48	FG1114049	3.7	526	0.515	0.491	0.153	0.142	0.142	0.129	0.361	0.344	0.182	0.133	0.597	0.623	
49	FG1114050	3.7	544	0.437	0.358	0.104	0.097	0.117	0.099	0.464	0.397	0.131	0.117	0.458	0.479	

1. Basic Information															
Part Name/ Description	LD-3FG				Samples	50			Test Date	2022.11.18					
2. Test Item					3. Specification / Procedure										
3.1	H Conical deviation				$\leq \pm 60''$										
3.2	V accuracy				$\leq \pm 60''$										
3.3	Compensation accuracy				$\leq \pm 60''$										
4. Test Record															
Unit S/N	3.1 H Conical deviation				3.2 V accuracy				3.3 V accuracy				3.4 V angel accuracy	3.5 line compensat or accuracy	
	Left	Right	Front	Back	Up	Down	Front	Back	Up	Down	Front	Back	Angle	Front raise	Back raise
	$\leq \pm 60''$				$\leq \pm 60''$				$\leq \pm 60''$				$\leq \pm 60''$	$\leq 70''$	
FG1114001	5'	-24'	-32'	-2''	-11'	1'	3'	-22''	-13''	25''	36''	12''	0''	15'	-5'
FG1114002	-30'	-20'	0'	-2''	-19'	-8'	11'	25''	-26''	5''	4''	36''	5''	6'	-13'
FG1114003	-5'	-30'	-19'	1''	-17'	-49'	4'	-37''	-22''	4''	9''	10''	0''	-15'	-6'
FG1114004	-50'	-11'	1'	-40''	-8'	-20'	11'	24''	-44''	-32''	-17''	43''	15''	23'	11'
FG1114005	5'	-5'	-4'	-38''	-36'	-9'	1'	27''	-6''	7''	18''	12''	1''	-6'	-15'
FG1114006	19'	-7'	-18'	-20''	-2'	-29'	8'	29''	-34''	6''	14''	31''	6''	13'	-22'
FG1114007	4'	12'	-18'	-22''	2'	-25'	-8'	3''	-4''	29''	36''	-4''	1''	-20'	29'
FG1114008	8'	-15'	32'	4''	-15'	4'	18'	-13''	-23''	-6''	-16''	1''	0''	5'	30'
FG1114009	18'	-1'	-6'	-1''	-15'	25'	39'	-17''	-6''	-13''	-2''	11''	0''	7'	29'
FG1114010	4'	-15'	-4'	4''	-1'	-16'	1'	22''	35''	38''	-24''	-31''	4''	19'	34'
FG1114011	2'	-27'	8'	33''	-18'	-2'	4'	-10''	-18''	8''	1''	4''	-1''	5'	27'
FG1114012	-5'	-13'	-12'	-12''	-32'	5'	22'	38''	1''	12''	8''	-22''	-1''	-9'	10'
FG1114013	3'	-25'	-16'	-18''	-2'	-10'	8'	4''	-15''	-10''	11''	18''	0''	5'	14'
FG1114014	-8'	-5'	-5'	-14''	5'	-41'	-19'	-17''	-31''	-8''	-13''	22''	-4''	13'	-19'
FG1114015	-16'	6'	7'	-15''	-10'	-27'	-5'	26''	-22''	2''	-10''	2''	0''	-2'	26'
FG1114016	6'	3'	6'	6''	-5'	-27'	31'	46''	-2''	-7''	1''	6''	-6''	-13'	36'
FG1114017	1'	-6'	-21'	-11''	-8'	1'	1'	-36''	-8''	8''	5''	-24''	-1''	-6'	11'
FG1114018	-1'	-8'	-11'	-19''	-3'	5'	9'	2''	-16''	-15''	-34''	-29''	-2''	-16'	-13'
FG1114019	6'	-13'	-32'	-11''	-2'	-1'	22'	-7''	-4''	-4''	-17''	-13''	0''	12'	18'
FG1114020	4'	-11'	10'	-6''	-34'	-33'	-16'	8''	-3''	4''	14''	0''	1''	16'	-10'
FG1114021	-32'	-39'	-21'	-9''	-14'	-4'	9'	-23''	-38''	5''	18''	35''	15''	22'	37'
FG1114022	-8'	-3'	16'	10''	-20'	6'	17'	21''	-1''	15''	21''	7''	-8''	24'	34'
FG1114023	5'	4'	-5'	14''	-5'	12'	34'	-43''	-5''	18''	28''	15''	4''	11'	28'
FG1114024	-2'	-4'	-11'	-8''	-5'	13'	4'	-5''	-3''	-23''	13''	2''	5''	30'	-13'
FG1114025	-34'	-4'	18'	-4''	-12'	-26'	-15'	27''	-28''	-1''	41''	11''	1''	-3'	25'
FG1114026	-6'	-1'	-13'	-2''	23'	32'	12'	-1''	6''	3''	6''	1''	1''	-7'	13'
FG1114027	-3'	1'	-5'	-15''	-15'	-13'	-6'	-10''	7''	20''	36''	-7''	-7''	24'	-18'
FG1114028	-3'	-15'	-1'	-6''	-11'	15'	36'	4''	-22''	-4''	13''	-1''	7''	-32'	-19'
FG1114029	-1'	-9'	-17'	-8''	-9'	-10'	12'	18''	14''	15''	32''	15''	2''	24'	32'
FG1114030	5'	23'	1'	-22''	-5'	-11'	4'	6''	-9''	-2''	3''	19''	4''	-22'	-16'
FG1114031	-22'	-16'	6'	-6''	-3'	-29'	27'	42''	-32''	7''	-15''	3''	5''	29'	34'
FG1114032	-2'	-22'	-14'	-32''	-8'	17'	1'	36''	-17''	7''	4''	-2''	9''	27'	22'
FG1114033	5'	-4'	7'	-9''	-13'	-22'	-43'	-12''	-14''	7''	6''	14''	-3''	39'	25'
FG1114034	-24'	-1'	-20'	-18''	-19'	-10'	-1'	30''	-37''	7''	43''	-26''	8''	28'	27'
FG1114035	-8'	6'	4'	-25''	-7'	-36'	-34'	-31''	-2''	-20''	11''	46''	4''	14'	36'
FG1114036	19'	-7'	6'	4''	-8'	-3'	48'	26''	-9''	1''	43''	20''	-1''	7'	39'
FG1114037	-8'	2'	-2'	-10''	-14'	-13'	-25'	-15''	-5''	-35''	-37''	-29''	1''	5'	46'
FG1114038	-15'	-29'	-4'	-15''	-2'	-4'	1'	6''	-1''	-20''	13''	11''	4''	21'	44'
FG1114039	-6'	-26'	-13'	22''	-7'	48'	49'	1''	-8''	-15''	1''	25''	4''	-8'	35'
FG1114040	1'	-26'	-26'	4''	-7'	7'	25'	6''	-20''	32''	32''	-36''	-6''	-22'	46'
FG1114041	3'	-39'	-25'	4''	-11'	22'	27'	-27''	-36''	-16''	1''	37''	-1''	-32'	19'
FG1114042	-9'	15'	-14'	-39''	-3'	-11'	-22'	-8''	-18''	-23''	1''	-15''	-5''	5'	14'
FG1114043	15'	15'	-22'	-22''	-4'	-25'	8'	33''	-4''	15''	25''	1''	3''	18'	16'
FG1114044	-12'	-8'	-7'	-10''	4'	-32'	7'	27''	-18''	6''	1''	18''	-4''	-14'	15'
FG1114045	7'	-4'	13'	-12''	3'	2'	14'	-7''	-28''	13''	9''	20''	9''	9'	25'
FG1114046	2'	-21'	-28'	4''	-23'	9'	4'	-46''	-45''	25''	1''	9''	4''	-1'	15'
FG1114047	3'	-35'	-9'	13''	-34'	-2'	-21'	-8''	-34''	-2''	-21''	8''	3''	33'	-36'
FG1114048	-13'	-6'	5'	-13''	4'	-16'	5'	25''	-26''	-9''	8''	51''	-1''	11'	-4'
FG1114049	-5'	-32'	-18'	-12''	4'	-25'	7'	15''	-28''	6''	-15''	15''	3''	-15'	4'
FG1114050	-4'	-17'	-1'	-5''	2'	-8'	-1'	-12''	-18''	-8''	-18''	9''	2''	-11'	25'
5. Final Judgment					Pass										
Tested By	王月红、朱小青、侯军				Approved By	侯军									

1. Basic Information																
Part Name/ Description	LD-3FG				Samples				10				Test Date		2022.11.19	
2. Test Item					3. Specification / Procedure											
5.1	H Conical deviation				≤±60"											
5.2	Vertical Line accuracy				≤±60"											
5.3	Compensating accuracy				≤±70"											
4. Test Record																
Unit S/N	5.1				5.2									5.3		
	Left	Right	Front	Back	Up	Down	Front	Back	Up	Down	Front	Back	Angle	Front raise	Back raise	
	≤±60'				≤±60"									≤±70"		
Before the test																
FG1114041	5'	-39'	-25'	1"	-11'	22'	27'	-27"	36"	-16"	1"	37"	-1"	-13'	-36'	
FG1114042	-9'	15'	-14'	-39"	-3'	-11'	-22'	-8"	-18"	-23"	1"	-15"	-5"	-6'	11'	
FG1114043	15'	15'	-22'	-22"	-4'	-25'	8'	33"	-4"	15"	25"	1"	4"	-16'	-13'	
FG1114044	-12'	-8'	-7'	-10"	-6'	-32'	7'	27"	-18"	6"	3"	18"	-4"	12'	18'	
FG1114045	5'	-4'	13'	-12"	4'	2'	14'	-7"	-28"	13"	9"	20"	9"	16'	-10'	
FG1114046	7'	-21'	-28'	4"	-23'	9'	4'	-46"	-45"	25"	1"	9"	4"	22'	37'	
FG1114047	5'	-35'	-9'	13"	-34'	-2'	-21'	8"	-34"	-2"	-21"	8"	4"	24'	34'	
FG1114048	-13'	-6'	5'	-13"	4'	-16'	3'	25"	-26"	-9"	8"	51"	-11"	11'	28'	
FG1114049	-5'	-32'	-18'	-12"	7'	-25'	4'	15"	-28"	6"	-15"	15"	2"	5'	30'	
FG1114004	-50'	-11'	1'	-40"	-8'	-20'	11'	24"	-44"	-32"	-17"	-43"	15"	-11'	-56'	
High temperature storage																
FG1114041	5'	-25'	-30'	-6"	-7'	14'	29'	-28"	-15"	-16"	-18"	20"	-8"	-29'	20'	
FG1114042	13'	-3'	-64'	15"	-54'	4'	34'	-36"	-10"	-12"	1"	-21"	3"	-22'	41'	
FG1114043	4'	3'	6'	-10"	-48'	-12'	-33'	42"	4"	2"	32"	27"	-2"	15'	13'	
FG1114044	-38'	-20'	14'	-18"	-12'	-26'	-7'	14"	-34"	-9"	-18"	29"	-15"	20'	-25'	
FG1114045	-11'	-8'	14'	-11"	-1'	5'	15'	7"	-38"	11"	4"	11"	-1"	35'	18'	
FG1114046	-20'	-16'	-11'	-6"	-1'	3'	-8'	-24"	-43"	22"	3"	4"	-4"	29'	14'	
FG1114047	-1'	10'	-8'	-27"	-38'	-38'	11'	-25"	-4"	-83"	13"	-86"	-5"	35'	-36'	
FG1114048	-58'	18'	2'	-44"	-39'	-39'	-40'	57"	-33"	-11"	-15"	48"	4"	65'	-14'	
FG1114049	-7'	-27'	-29'	-6"	-4'	-54'	7'	33"	-32"	4"	-13"	19"	3"	-4'	-15'	
FG1114004	-63'	-35'	4'	-3"	-12'	-3'	2'	22"	-10"	-100"	40"	114"	-27"	-18'	-24'	
Low temperature storage																
FG1114041	10'	-15'	-25'	-8"	-7'	20'	18'	-22"	-19"	4"	8"	-14"	-9"	-19'	-29'	
FG1114042	25'	-29'	-76'	18"	-13'	51'	4'	-76"	-6"	-12"	-33"	-25"	4"	-14'	18'	
FG1114043	5'	7'	2'	10"	-22'	-39'	-11'	48"	-7"	-1"	19"	25"	3"	25'	30'	
FG1114044	-30'	-16'	-21'	16"	3'	-34'	11'	23"	-30"	-18"	-20"	34"	-27"	-7'	17'	
FG1114045	-8'	-20'	12'	17"	-22'	-8'	-30'	23"	-32"	5"	5"	43"	-21"	15'	-7'	
FG1114046	-22'	-8'	3'	1"	-34'	-38'	20'	-24"	-1"	15"	30"	-32"	-20"	15'	-11'	
FG1114047	-10'	1'	4'	-8"	-25'	46'	5'	47"	-23"	55"	31"	-71"	-29"	34'	-27'	
FG1114048	-20'	20'	9'	-31"	-36'	-16'	-42'	20"	-52"	7"	-23"	40"	5"	52'	-25'	
FG1114049	-10'	-39'	-4'	9"	-48'	-39'	-6'	27"	-21"	-3"	-22"	27"	-11"	-9'	-5'	
FG1114004	-71'	-25'	-7'	6"	-8'	-32'	1'	44"	-7"	-65"	20"	81"	41"	-16'	-38'	
5. Final Judgment					Pass											
Tested By	王月红、朱小青、侯军				Approved By									侯军		

1. Basic Information																
Part Name/Description	LD-3FG				Samples				10				Test Date		2022/11/22	
2. Test Item				3. Specification / Procedure												
5.1	H Conical deviation				≤±60"											
5.2	Vertical Line accuracy				≤±60"											
5.3	Compensating accuracy				≤±70"											
4. Test Record																
Unit S/N	5.1				5.2								5.3			
	Left	Right	Front	Back	Up	Down	Front	Back	Up	Down	Front	Back	Angle	Front raise	Back raise	
	≤±60'				≤±60"								≤±70"			
Before the test																
FG1114031	-22'	-18'	6'	-6"	-3'	-29'	27'	-12"	-32"	4"	-15"	3"	3"	29'	34'	
FG1114032	5'	-22'	-14'	-32"	-8'	17'	2'	36"	-17"	5"	4"	-2"	9"	27'	22'	
FG1114033	-8'	-2'	7'	-9"	-13'	-22'	-43'	-12"	-14"	-7"	6"	14"	-3"	1'	41'	
FG1114034	-24'	-1'	-20'	-18"	-19'	-10'	1'	30"	-37"	5"	43"	-26"	8"	28'	27'	
FG1114035	-8'	6'	5'	-25"	-7'	-36'	-34'	-31"	-2"	-20"	11"	-16"	5"	14'	36'	
FG1114036	19'	-7'	5'	4"	-8'	-3'	48'	26"	-9"	2"	43"	20"	-1"	7'	39'	
FG1114037	-8'	-4'	-2'	-10"	-14'	-13'	-25'	-15"	-5"	-35"	-37"	-29"	1"	5'	46'	
FG1114038	-15'	-29'	-4'	-15"	2'	-4'	1'	6"	-1"	20"	13"	6"	11"	-3'	52'	
FG1114039	-6'	-26'	-13'	22"	-7'	48'	49'	1"	-8"	-15"	1"	25"	4"	-8'	35'	
FG1114040	1'	-26'	-26'	4"	-7'	7'	25'	6"	-20"	32"	32"	-36"	-6"	-22'	46'	
After high and low temperature cycle shock																
FG1114031	-79'	-2'	59'	1"	-23'	-30'	4'	43"	-106"	-18"	-87"	24"	-27"	70'	-3'	
FG1114032	-72'	-26'	41'	4"	-45'	-19'	1'	35"	5"	-58"	18"	50"	5"	52'	-11'	
FG1114033	-95'	26'	100'	-36"	-45'	-57'	-71'	25"	-42"	16"	-38"	6"	11"	94'	-57'	
FG1114034	-67'	18'	32'	-31"	1'	-31'	31'	39"	-58"	42"	65"	-84"	5"	46'	-15'	
FG1114035	-97'	5'	81'	-34"	-59'	-54'	-112'	-11"	-29"	-49"	-11"	67"	-10"	91'	-50'	
FG1114036	3'	9'	10'	-15"	-21'	-32'	11'	51"	-8"	-31"	50"	54"	18"	15'	16'	
FG1114037	-16'	-29'	11'	17"	6'	-17'	18'	27"	-4"	-21"	-34"	-38"	1"	32'	36'	
FG1114038	-18'	6'	2'	-21"	-24'	-30'	6'	40"	2"	20"	20"	-51"	32"	18'	18'	
FG1114039	-65'	3'	27'	-20"	1'	1'	65'	41"	-71"	-84"	61"	90"	21"	23'	12'	
FG1114040	-36'	-64'	30'	35"	-28'	4'	1'	36"	-8"	15"	29"	-28"	-12"	19'	42'	
5. Final Judgment				Pass												
Tested By	王月红 朱小青 侯军				Approved By								侯军			

1. Basic Information

Part Name/ Description	LD-3FG	Samples	10	Test Date	2022.11.23
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2. Test Item

6.1	H Conical deviation
6.2	Vertical Line accuracy
6.3	Compensating accuracy

3. Specification / Procedure

$\leq \pm 80''$
$\leq \pm 80''$
$\leq \pm 100''$

4. Test Record

Unit S/N	6.1 H Conical deviation				6.2 V accuracy									6.3 line compensat	
	Left	Right	Front	Back	Up	Down	Front	Back	Up	Down	Front	Back	Angle	Front raise	Back raise
	$\leq \pm 80''$				$\leq \pm 80''$									$\leq \pm 100''$	

Before the test

FG1114021	-32"	-39"	-21"	-9"	-14"	-4"	9"	-23"	-38"	5"	18"	35"	15"	22"	37"
FG1114022	-8"	-3"	16"	10"	-20"	6"	17"	21"	-1"	15"	21"	7"	-8"	24"	34"
FG1114023	5"	4"	-5"	-14"	-5"	12"	-34"	-43"	3"	18"	28"	15"	4"	11"	28"
FG1114024	5"	-4"	-11"	-13"	-8"	-5"	13"	4"	-5"	5"	-23"	13"	2"	5"	30"
FG1114025	-34"	-4"	18"	-4"	-12"	-26"	-15"	27"	-28"	-1"	41"	11"	1"	-3"	25"
FG1114026	-6"	-1"	-13"	-18"	-2"	23"	32"	12"	-1"	3"	7"	6"	1"	-7"	13"
FG1114027	-3"	1"	5"	-15"	-15"	-13"	-6"	-10"	4"	20"	36"	-7"	-7"	-24"	-18"
FG1114028	7"	-15"	-1"	-6"	-11"	15"	36"	4"	-22"	-4"	13"	-1"	7"	-39"	18"
FG1114029	-1"	-9"	-17"	-9"	-8"	-10"	12"	18"	-14"	15"	32"	15"	2"	24"	32"
FG1114030	5"	23"	1"	-22"	-5"	-11"	4"	6"	-9"	-3"	3"	19"	4"	-22"	-16"

After high temperature and high humidity

FG1114021	-93"	5"	53"	-60"	-32"	-20"	-1"	-44"	-88"	-28"	-46"	64"	9"	69"	-70"
FG1114022	-81"	16"	79"	-12"	-32"	-60"	-6"	98"	-58"	-16"	79"	11"	58"	93"	-63"
FG1114023	-41"	52"	9"	-55"	-40"	-76"	-56"	51"	-28"	-10"	63"	32"	57"	58"	-18"
FG1114024	-10"	5"	-13"	-36"	-9"	13"	-14"	-27"	-6"	15"	29"	-15"	22"	-11"	-20"
FG1114025	-45"	37"	18"	-52"	-46"	-44"	-57"	-46"	-50"	8"	63"	-6"	65"	72"	-49"
FG1114026	4"	-22"	-49"	-16"	-18"	21"	20"	5"	-27"	-47"	28"	34"	5"	51"	39"
FG1114027	-8"	4"	-18"	-9"	-11"	42"	16"	18"	5"	27"	24"	-18"	-30"	17"	-43"
FG1114028	6"	38"	-22"	-34"	-10"	29"	-3"	21"	-7"	-11"	12"	1"	4"	43"	-21"
FG1114029	-35"	28"	13"	-63"	-13"	42"	14"	61"	6"	-13"	13"	42"	5"	82"	95"
FG1114030	-38"	32"	25"	-21"	-68"	-86"	-74"	86"	-26"	-62"	41"	60"	23"	95"	-48"

5. Final Judgment

Pass

Tested By	王月红、朱小青、侯军	Approved By	侯军
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LD-3FG Simulated car transport inspection list

文件编号:LSGD/SC-09-04

Tester: 王月红、朱小青、侯军

Date:2022.11.28

S/N	Number	Overall accuracy (")												Compensation accuracy (")												Determination					
		H				V front				V right				left raise				right raise				front raise					back raise				
		1	2	3	4	1	2	3	4	1	2	3	4	夹角	1	2	3	4	1	2	3	4	1	2	3		4	1	2	3	4
Before the test																															
1	FG1114041	5"	-32"	-41"	-7"	-6"	29"	41"	-31"	-30"	5"	13"	11"	-6"	-19"	-79"	-18"	43"	-11"	-27"	-30"	-4"	5"	-37"	-45"	-1"	19"	-67"	-17"	49"	
2	FG1114042	30"	-18"	-60"	19"	-8"	32"	1"	-49"	-12"	-15"	-9"	1"	-9"	-23"	-93"	-4"	60"	5"	-55"	-32"	25"	-7"	-57"	-17"	22"	-13"	-100"	-14"	65"	
3	FG1114046	-35"	-14"	5"	-16"	-7"	-8"	5"	-20"	-42"	12"	1"	23"	-9"	-15"	-26"	-13"	-13"	5"	14"	-45"	-56"	5"	22"	-46"	-48"	-4"	-49"	-20"	20"	
4	FG1114047	-70"	38"	16"	-71"	-35"	25"	1"	32"	-41"	5"	-16"	29"	13"	40"	5"	-60"	-8"	47"	55"	-86"	-80"	27"	48"	-65"	-67"	16"	-1"	-57"	-15"	
5	FG1114048	-17"	-25"	-21"	-20"	-20"	-35"	-22"	13"	-12"	-9"	-3"	25"	1"	-32"	-46"	-4"	-16"	5"	3"	-46"	-40"	-14"	1"	-23"	-46"	-25"	-66"	-4"	23"	
6	FG1114049	1"	-8"	-40"	-24"	5"	27"	25"	-30"	-24"	5"	8"	6"	1"	-13"	-49"	-43"	29"	5"	-18"	-39"	-3"	3"	-39"	-55"	-13"	-10"	-86"	-28"	51"	
After the test																															
1	FG1114041	1"	-8"	-40"	-24"	5"	27"	25"	-30"	-24"	5"	8"	6"	1"	-13"	-49"	-43"	29"	5"	-18"	-39"	-3"	3"	-39"	-55"	-13"	-10"	-86"	-28"	51"	
2	FG1114042	13"	-13"	-29"	-9"	-20"	21"	5"	-32"	-18"	-11"	-8"	-27"	-12"	5"	-86"	-31"	36"	5"	-37"	-34"	5"	-4"	-39"	-20"	26"	5"	-93"	-18"	64"	
3	FG1114046	-25"	1"	-11"	-41"	-3"	5"	-16"	-21"	-25"	7"	20"	32"	-38"	5"	-16"	-32"	-16"	11"	13"	-58"	-57"	16"	40"	-59"	-76"	19"	40"	-59"	-76"	
4	FG1114047	5"	-4"	-25"	-13"	-21"	-33"	-4"	15"	-25"	60"	34"	-65"	-25"	14"	-42"	-36"	27"	7"	4"	-37"	-32"	11"	6"	-57"	-31"	5"	-50"	-28"	45"	
5	FG1114048	-38"	27"	12"	-52"	-33"	-12"	-26"	30"	-39"	2"	-9"	44"	5"	13"	5"	-44"	-6"	47"	41"	-83"	-57"	36"	50"	-74"	-72"	17"	-21"	-55"	2"	
6	FG1114049	-22"	-15"	5"	-25"	-29"	-52"	-13"	36"	-27"	4"	-22"	22"	5"	-30"	-35"	-18"	-3"	-1"	20"	-34"	-67"	-14"	20"	-34"	-62"	-16"	-50"	-40"	4"	

1. Basic Information																
Part Name/ Description		LD-3FG				Samples				6		Test Date			2022.11.29	
2. Test Item											3. Specification / Procedure					
8.1		H Conical deviation				$\leq \pm 60''$										
8.2		Vertical Line accuracy				$\leq \pm 60''$										
8.3		Compensating accuracy				$\leq \pm 70''$										
4. Test Record																
Unit S/N	State	8.1 H Conical deviation				8.2 V accuracy									8.3 line compensat or	
		Left	Right	Front	Back	Up	Down	Front	Back	Up	Down	Front	Back	Angle	Front raise	Back raise
		$\leq \pm 60''$				$\leq \pm 60''$									$\leq \pm 70''$	
FG1114043	before falling	4''	20''	5''	-15''	-22''	-30''	-32''	34''	-3''	-10''	21''	32''	-15''	32''	28''
	after falling	20''	22''	-12''	-1''	-23''	-20''	-25''	25''	-1''	-2''	26''	35''	0''	29''	21''
FG1114045	before falling	-7''	-13''	13''	20''	-18''	6''	25''	-2''	-36''	-7''	-5''	33''	-11''	29''	22''
	after falling	-36''	-3''	59''	-2''	4''	-14''	6''	23''	-48''	-8''	-13''	53''	15''	65''	-32''
FG1114046	before falling	-23''	14''	20''	-40''	-13''	-30''	-6''	1''	-21''	4''	14''	30''	-21''	60''	-18''
	after falling	-27''	15''	3''	-25''	-1''	-6''	-26''	-22''	-26''	4''	15''	40''	-2''	53''	-11''
FG1114047	before falling	8''	14''	-12''	-17''	-27''	-19''	-20''	11''	-30''	55''	42''	-48''	-47''	37''	-11''
	after falling	11''	-4''	-18''	-4''	-16''	-12''	-4''	8''	-41''	50''	41''	-49''	-27''	17''	29''
FG1114048	before falling	-17''	-37''	28''	-58''	-33''	-17''	-38''	26''	-41''	1''	-18''	29''	3''	79''	-29''
	after falling	-41''	51''	44''	-62''	-38''	-30''	-44''	37''	-47''	-4''	1''	39''	24''	99''	-55''
FG1114049	before falling	-14''	-13''	5''	-17''	-18''	-46''	-15''	42''	-18''	-6''	-10''	32''	-18''	13''	-4''
	after falling	-13''	-8''	-10''	-25''	-11''	-45''	-11''	36''	-14''	-4''	-14''	33''	4''	8''	-13''
5. Final Judgment											Pass					
Tested By		王月红 朱小青 侯军									Approved By			侯军		

1. Basic Information																
Part Name/Description	LD-3FG				Samples				10				Test Date		2022.11.28	
2. Test Item		3. Specification / Procedure														
7.1	H Conical deviation	≦±60"														
7.2	Vertical Line accuracy	≦±60"														
7.3	Compensating accuracy	≦±70"														
4. Test Record																
Unit S/N	7.1 H Conical deviation						7.2 V accuracy						Angle accuracy	7.3 Compensating accuracy		
	H(arcsec)						left V1(arcsec)			right V2(arcsec)			V1&V2	Front raise	Back raise	
	left	right	front	back	upper	down	left	right	upper	down	front	back				
FG1114001	original	2"	-20"	-36"	-4"	3"	-4"	12"	1"	-15"	-27"	42"	8"	44"	-11"	6"
	first	-24"	31"	52"	-61"	-50"	-46"	-39"	39"	-4"	-22"	58"	55"	52"	76"	-83"
	second	6"	-34"	-37"	8"	-1"	12"	6"	-20"	5"	1"	58"	24"	5"	-29"	-15"
	third	5"	-27"	-18"	-6"	-36"	37"	-18"	-51"	-6"	11"	47"	18"	30"	-8"	-5"
	fourth	5"	-49"	-19"	14"	5"	15"	13"	-27"	-17"	8"	29"	18"	32"	-14"	11"
	fiveth	5"	-64"	-55"	35"	-8"	33"	27"	-50"	-7"	4"	43"	22"	17"	-60"	5"
sixth	-4"	-61"	-27"	32"	15"	16"	34"	36"	32"	6"	27"	27"	15"	32"	-6"	
FG1114002	original	4"	-10"	-26"	-5"	-11"	-6"	14"	31"	-31"	-7"	4"	39"	-22"	-14"	-6"
	first	5"	-21"	-44"	-4"	-2"	-8"	17"	24"	-25"	-8"	25"	51"	-24"	-41"	-18"
	second	36"	-72"	-102"	39"	-24"	46"	37"	-46"	-56"	20"	-4"	8"	-34"	-108"	76"
	third	-20"	-29"	-29"	-5"	-4"	-11"	6"	20"	53"	4"	-6"	25"	-5"	25"	-19"
	fourth	12"	-48"	-71"	34"	5"	19"	1"	-19"	-32"	5"	-1"	6"	-32"	-87"	36"
	fiveth	95"	-126"	-159"	93"	-82"	65"	93"	-74"	-64"	39"	-24"	-13"	-46"	-175"	139"
sixth	70"	-130"	-122"	-100"	-54"	68"	63"	-79"	-54"	-4"	-4"	49"	-47"	-174"	121"	
FG1114003	original	6"	-25"	-28"	6"	4"	-41"	-27"	-6"	-26"	19"	1"	5"	-36"	31"	15"
	first	6"	-22"	-6"	3"	-18"	-35"	-43"	-9"	-33"	9"	7"	13"	-32"	6"	-11"
	second	7"	-55"	-38"	23"	-13"	-11"	-49"	-42"	45"	21"	-4"	1"	43"	-58"	87"
	third	14"	-23"	-32"	-11"	-15"	-36"	-25"	-1"	-23"	-27"	-18"	-7"	-26"	10"	-13"
	fourth	-2"	-46"	-41"	18"	-6"	-6"	-32"	-36"	-35"	14"	4"	7"	-45"	24"	-31"
	fiveth	21"	-54"	-58"	29"	-115"	76"	79"	-124"	-148"	139"	-106"	-106"	-121"	-53"	28"
sixth	3"	-53"	-11"	46"	-57"	91"	86"	90"	-18"	-7"	12"	31"	-32"	11"	-6"	
FG1114005	original	-23"	20"	27"	-30"	-55"	-39"	-36"	53"	5"	-13"	36"	34"	-1"	46"	-51"
	first	-175"	98"	166"	-119"	-128"	-137"	-114"	158"	-30"	85"	2"	107"	59"	281"	-197"
	second	65"	35"	-95"	-60"	-15"	49"	41"	-22"	-8"	86"	40"	-81"	-102"	15"	27"
	third	-199"	98"	194"	-102"	-64"	67"	98"	79"	-217"	113"	-174"	-83"	231"	260"	-150"
	fourth	-125"	85"	109"	5"	-25"	5"	-10"	1"	-74"	35"	-36"	-18"	-245"	144"	-160"
	fiveth	-53"	22"	48"	-34"	6"	9"	20"	-10"	-23"	-10"	8"	25"	40"	23"	-53"
sixth	-60"	-89"	42"	60"	-76"	32"	58"	-81"	-126"	19"	-93"	-13"	-133"	8"	-5"	
FG1114006	original	-14"	-15"	-22"	-34"	-7"	4"	3"	11"	-22"	7"	20"	-18"	5"	-14"	-27"
	first	-122"	36"	17"	-97"	-60"	-66"	-69"	64"	-9"	5"	39"	43"	25"	97"	-103"
	second	-90"	76"	36"	-128"	-82"	-55"	-65"	68"	-7"	6"	41"	30"	44"	123"	-137"
	third	-78"	95"	12"	-126"	-63"	-67"	-43"	79"	-6"	18"	43"	19"	39"	99"	-128"
	fourth	-119"	83"	74"	-123"	-73"	-82"	4"	96"	-5"	-11"	30"	50"	46"	124"	-162"
	fiveth	-84"	34"	33"	-82"	5"	-6"	16"	6"	-20"	-1"	26"	43"	1"	84"	-123"
sixth	-79"	28"	34"	-76"	-4"	1"	8"	5"	-42"	13"	3"	23"	24"	64"	-102"	
FG1114007	original	-6"	25"	4"	-35"	-41"	-37"	-46"	12"	-10"	32"	60"	6"	43"	22"	-39"
	first	-1"	22"	-18"	-44"	-19"	-40"	-32"	22"	-3"	51"	47"	-15"	40"	35"	-38"
	second	14"	59"	-59"	-77"	-30"	-25"	39"	5"	-39"	63"	88"	-43"	20"	11"	-37"
	third	-26"	142"	12"	-147"	-70"	-89"	-31"	83"	56"	90"	-33"	-34"	79"	106"	-95"
	fourth	5"	37"	-40"	-64"	-29"	-39"	1"	20"	-12"	60"	58"	-34"	46"	11"	-6"
	fiveth	55"	-44"	-93"	13"	-38"	-1"	1"	-23"	-4"	71"	50"	-39"	6"	-64"	56"
sixth	46"	-30"	-87"	14"	-22"	-5"	24"	-25"	-36"	63"	78"	1"	-34"	-32"	36"	
FG1114008	original	5"	-20"	4"	1"	-28"	3"	28"	-13"	10"	-12"	-20"	3"	17"	-15"	-37"
	first	6"	85"	-48"	-109"	-19"	-27"	-18"	26"	-38"	-38"	-36"	39"	22"	221"	42"
	second	-46"	19"	45"	-41"	-33"	-19"	-39"	13"	-21"	-18"	-9"	1"	5"	82"	-65"
	third	-56"	45"	50"	-66"	-27"	-53"	-27"	46"	5"	-32"	22"	20"	7"	77"	-95"
	fourth	-83"	44"	83"	-66"	-47"	-54"	-60"	46"	-20"	-36"	-12"	12"	23"	72"	-114"
	fiveth	-71"	1"	65"	-26"	-33"	-18"	-39"	13"	-32"	-47"	-15"	1"	10"	51"	-79"
sixth	-37"	-38"	46"	15"	5"	-4"	-6"	-10"	-46"	-35"	-36"	23"	21"	-3"	51"	
FG1114009	original	6"	8"	-20"	-8"	-4"	22"	21"	-10"	-4"	5"	-1"	4"	18"	5"	22"
	first	-31"	40"	39"	-46"	-22"	-21"	6"	29"	-39"	-48"	46"	55"	25"	83"	-41"
	second	-46"	37"	41"	-42"	-29"	-15"	-14"	36"	-25"	1"	34"	53"	6"	56"	-58"
	third	-96"	90"	97"	-105"	-95"	-34"	-76"	62"	-5"	-45"	15"	44"	67"	145"	-140"
	fourth	-5"	13"	11"	19"	5"	-8"	20"	16"	5"	-13"	4"	18"	27"	29"	-19"
	fiveth	6"	1"	-15"	-12"	7"	6"	20"	-4"	5"	-4"	4"	7"	21"	-11"	79"
sixth	1"	-6"	-27"	7"	-4"	22"	22"	-20"	-15"	11"	-13"	-11"	28"	-9"	32"	
FG1114010	original	5"	-18"	-11"	17"	5"	7"	6"	1"	-16"	11"	-16"	-7"	28"	-4"	21"
	first	-201"	74"	183"	-93"	-129"	-78"	-127"	98"	-22"	-42"	-19"	48"	36"	179"	-43"
	second	-117"	1"	102"	-25"	-45"	-46"	-46"	55"	-20"	-44"	-12"	57"	-8"	186"	59"
	third	5"	-33"	-22"	11"	-6"	7"	18"	2"	5"	-34"	37"	-34"	-38"	62"	43"
	fourth	-6"	-34"	5"	16"	-16"	-4"	20"	4"	-15"	20"	-8"	25"	-32"	-14"	51"
	fiveth	-15"	-32"	7"	20"	-14"	3"	27"	-1"	-27"	17"	1"	-16"	-16"	7"	28"
sixth	-142"	-27"	140"	22"	-35"	41"	-34"	47"	-54"	-33"	-54"	44"	13"	105"	-86"	
FG1114050	original	-1"	13"	-22"	-22"	-31"	-38"	22"	5"	-19"	-2"	-4"	1"	5"	6"	-19"
	first	27"	60"	67"	-86"	-19"	-20"	1"	-24"	-35"	-16"	-17"	25"	-1"	79"	-61"
	second	-27"	48"	4"	-71"	-28"	-30"	-39"	-5"	-11"	5"	-1"	1"	2"	69"	-75"
	third	-109"	145"	96"	106"	-77"	-103"	-82"	89"	-22"	-46"	36"	46"	51"	84"	-161"
	fourth	-118"	94"	87"	-121"	-73"	-76"	-78"	64"	-18"	-61"	28"	62"	23"	37"	-165"
	fiveth	-45"	57"	22"	-74"	-13"	6"	15"	-27"	-9"	-18"	-1"	18"	4"	40"	-81"
sixth	-62"	25"	48"	-38"	-29"	-14"	30"	-12"	-24"	-18"	-21"	30"	32"	44"	-82"	
5. Final Judgment		Pass														
Tested By	王月红、朱小青、侯军				Approved By				侯军							

1. Basic Information					
Part Name/ Description	LD-3FG	Samples	5	Test Date	2022.11.28
2. Test Item			3. Specification / Procedure		
3.8	Waterproof test		IP×4		
4. Test Record					
unit S/N	10.1 Test result				
FG1114001	✓				
FG1114002	✓				
FG1114003	✓				
FG1114005	✓				
FG1114009	✓				
5. Final Judgment		Pass			
Tested By	王月红、朱小青、侯军		Approved By	侯军	

Charge and discharge record sheet

Date: 2022.11.30

Tester: 王月红、朱小青、侯军

Model: LD-3FG

S/N	Number	Starting time	Ending Time	Length of time	Charge and discharge record											备注		
					(dis)charge first grid			(dis)charge second grid			(dis)charge third grid			(dis)charge fourth grid				
					current (mA)	voltage (V)	time	current (mA)	voltage (V)	time	current (mA)	voltage (V)	time	current (mA)	voltage (V)		time	
1	FG1114004	9:59	14:32	4:33														Charge
2	FG1114031	9:59	13:53	3:54														Charge
3	FG1114032	9:59	14:12	4:13														Charge
4	FG1114033	9:59	14:07	4:08														Charge
5	FG1114034	9:59	14:55	4:56														Charge
6	FG1114035	9:59	14:14	4:15														Charge
7	FG1114036	9:59	14:11	4:12														Charge
8	FG1114037	9:59	14:08	4:09														Charge
9	FG1114038	9:59	14:22	4:23														Charge
10	FG1114039	9:59	13:58	3:59														Charge
11	FG1114040	9:59	14:03	4:04														Charge
12	FG1114044	9:59	14:25	4:26														Charge
13	FG1114004	16:33	0:41	8:08			2h31min			4h13min			1h20min			1h04min		Discharge
14	FG1114031	16:33	0:53	8:20			2h51min			3h20min			1h58min			1h01min		Discharge
15	FG1114032	16:33	1:50	9:17			4h43min			2h31min			1h02min			1h01min		Discharge
16	FG1114033	16:33	1:45	9:12			3h38min			2h36min			1h41min			1h17min		Discharge
17	FG1114034	16:33	0:37	8:04			4h53min			1h05min			1h05min			1h01min		Discharge
18	FG1114035	16:33	4:53	12:20			4h49min			3h28min			1h13min			2h50min		Discharge
19	FG1114036	16:33	2:01	9:28			6h11min			1h06min			1h15min			56min		Discharge
20	FG1114037	16:33	1:26	8:53			2h53min			4h48min			38min			32min		Discharge
21	FG1114038	16:33	0:18	7:45			2h45min			3h03min			1h05min			52min		Discharge
22	FG1114039	16:33	1:01	8:28			2h54min			3h24min			1h48min			20min		Discharge
23	FG1114040	16:33	1:27	8:54			3h04min			3h35min			1h15min			1h		Discharge
24	FG1114044	16:33	1:32	8:59			5h43min			1h04min			1h37min			35min		Discharge