Shenzhen XQPOWER Technology Co., LTD

FEIYIDA

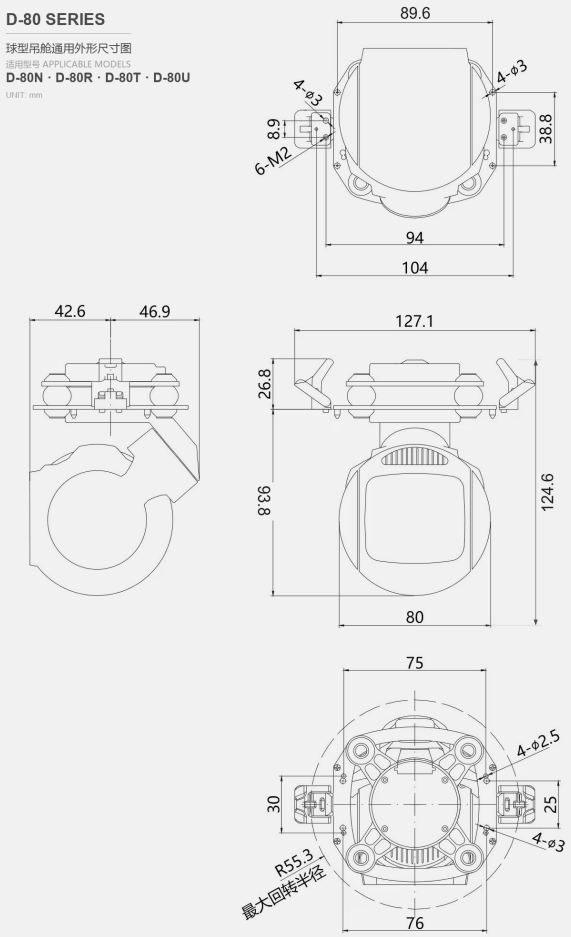
PRODUCT SPECIFICATION

DOCUMENT NO.	FYD-80N-SP-2601
VER	V1.0
PAGE	P.1
PREPARE DATE	20261106

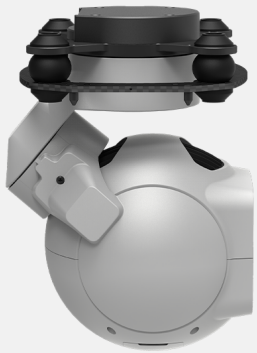
SERIES	FYD-80	NAME	Black Light Full-color Night Vision Spherical Pod	MODEL	FYD-80N	TYPE	AI Gimbal Camera

Application	UAV inspection / surveillance / patrol

DIMENSIONAL DRAWING - POD



SIDE VIEW



GENERAL SPECIFICATIONS

NO.	General	
1-1	Dimensions	89.6 x 86 x 124.6 mm
1-2	Weight	398 g
1-3	Operating Voltage	20 ~ 53 VDC
1-4	Power	6.5 W avg. (light off) / 28.2 W stall (light on)
1-5	Installation	Suspended / upright
1-6	Sphere Diameter	80 mm
NO.	**Gimbal**	
2-1	Gimbal Type	3-axis nonorthogonal mechanical stabilization
2-2	Angular Accuracy	±0.01°
2-3	Tilt Protection Threshold	45°
2-4	Controllable Range	Pitch -145° ~ +60° Yaw ±360° continuous
2-5	Max. Controllable Speed	150°/s
NO.	**Zoom Camera**	
3-1	Image Sensor	1/2.8" CMOS, 2.07 MP, ultra starlight
3-2	Focal Length	6.1 ~ 61.4 mm
3-3	Equivalent Focal Length	41.6 ~ 415.8 mm
3-4	Aperture	f/1.8 ~ f/2.6
3-5	Field of View	HFOV 48.8°~5.2° VFOV 28.6°~2.9° DFOV 55.0°~6.0°
3-6	Resolution	1920 x 1080
3-7	Pixel Pitch	2.9 μm (H) x 2.9 μm (V)
3-8	Optical Zoom Rate	10x
3-9	Equivalent Digital Zoom Rate	4x
3-10	Hybrid Zoom	40x
3-11	Image Engine	AI-ISP full-color night vision AI-HDR
NO.	**Laser Lighting Module**	
4-1	Wavelength	850 ± 10 nm
4-2	Laser Power	0.8 W
4-3	Beam Angle	8°
4-4	Beam Diameter	14 m @ 100 m
4-5	Effective Illumination Distance	≤ 200 m
4-6	Laser Safety	Class 3B (IEC 60825-1:2014)

PREPARED	CHECKED	APPROVED

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SERIES	FYD-80	NAME	Black Light Full-color Night Vision Spherical Pod	MODEL	FYD-80N	TYPE	AI Gimbal Camera

Product view / target distance / technical data

PRODUCT VIEW & TARGET DISTANCE



Rear oblique view



Front view

TARGET DISTANCE (EN62676-4:2015)

TARGET	PERSON	SMALL VEHICLE	LARGE VEHICLE
Detect	927 m	1218 m	2595 m
Recognize	185 m	244 m	519 m
Verify	93 m	122 m	260 m

Notes: reference target sizes - person 1.8 x 0.5 m, small vehicle 4.2 x 1.8 m, large vehicle 6.0 x 4.0 m (official spec sheet P2). Johnson's criterion distances are not listed.

TECHNICAL DATA

OPTICAL & SYSTEM SPECIFICATIONS

NO.	AI Multi-object Detection & Tracking	
5-1	Object Size	16x16 ~ 128x128 px
5-2	Object Identification Delay	< 40 ms
5-3	Tracking Speed	±32 px / field
5-4	Deviation Refresh Rate	30 Hz
5-5	Deviation Output Delay	≤ 5 ms
NO.	**Image & Video**	
6-1	Image Format	JPEG
6-2	Max. Image Resolution	1920 x 1080
6-3	EXIF	Time, camera attitude, carrier coordinates, resolution
6-4	Video Format	MP4
6-5	Max. Video Resolution	Stream 1920x1080@30fps Record 1920x1080@30fps
6-6	OSD	Time, camera attitude, carrier coordinates, zoom, SD status
6-7	SEI	Supported via firmware upgrade
6-8	Stream Encode Format	H.264 / H.265
6-9	Stream Network Protocol	RTSP
6-10	Stream Latency	190~200 ms (Dragonfly) 230~250 ms (QGC)
NO.	**Storage**	
7-1	Supported SD Cards	microSD, up to 256 GB, U3/V30 or above
NO.	**Environment**	
8-1	Operating Temperature	-20°C ~ 50°C
8-2	Storage Temperature	-40°C ~ 60°C
8-3	Operating Humidity	≤ 85% RH (non-condensing)
NO.	**Control & Software**	
9-1	Control Interface	Network / serial / S.BUS
9-2	Protocol	Private protocol, MAVLink
9-3	Software	Dragonfly / XF-QGC
9-4	Yaw Rotation	360° x N continuous

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