Technical Parameters List for Imaging Lenses

BASIC SYSTEM PARAMETERS			
Number	Parameter name	Reference	Note
1	Working Distance(mm)		The distance from the front end of lens to object.
2	Back focal length(mm)		The distance from the front end of lens to object.
3	I/O (mm)		The distance between the image and object.
4	Focal length of system(mm)		
5	Diameter of Entrance pupil(mm)		Effective clear aperture when imaged.
6	Working wavelength range(nm)		The spectrum range when imaging lens worked.
7*1	Full angle of field(°)		The viewing angle that can view the whole object.
8*2	Back focal length(mm)		The viewing area that can view the whole object.
9	Sensor size(mm x mm)		The target size of detector.
10	Primary magnification		The ratio between sensor size and FOV.
11	Zoom Ratio		The ratio between the sensor size and FOV when the working focal length is different for zoom lens.

Please refer to following pages

Technical Parameters List for Imaging Lenses

OPTICAL PERFORMANCE			
Number		Reference	Note
12	Transmission(%)		Attenuation rate of lens to image beam intensity.
13	Relative illumination(%)		The ratio of outer illumination and central illumination.
14	MTF (%@lp/mm)		The stripe contrast under distinguishable line pair per millimeter.
15	Distortion(%)		The ratio of the height difference between off-axis beam imaging point and ideal imaging point and the height of ideal imaging point.

DETECTOR PARAMETERS			
Number	Parameter name	Reference	Note
16	Sensor size (mm x mm)		The target size of detector
17	Horizontal/Vertical resolution(px x px)		The horizontal pixel QTY of detector and vertical pixel QTY of detector.
18	Horizontal/Vertical pixel size (μm x μm)		

Please refer to following pages

Technical Parameters List for Imaging Lenses

PORT REQUIREMENT			
Number	Parameter name	Reference	Note
19	The total length of lens (mm)		
20	The position of entrance pupil(mm)		The distance between the entrance pupil of lens and the front mechanical end surface of lens.
21	Size of entrance pupil(mm)		The diameter of entrance pupil for lens.
22	The maximum diameter(mm)		
23	Weight(kg)		

ILLUMINATION*3			
Number	Parameter name	Reference	Note
24	The object luminous characteristic function		The changes in the function between the emitted intensity of object and angle of emission.
25	Lighting characteristic function		The changes in the function between emitted intensity of light source and angle of emission.
26	The reflective character of object		The function of reflective character for object to lighting light.

Please refer to following pages

Technical Parameters List for Imaging Lenses

ENVIRONMENT			
Number	Parameter name	Reference	Note
27	Work temperature (°C)		The environmental temperature range when the lens worked normally.
28	Storage temperature (°C)		The environmental temperature range when the lens is stored
29	Vibration(g)		The maximum vibratory acceleration when the lens worked normally.
30	Impact(g)		Maximum impact acceleration that the lens can be allowed.
31	Others		Humidity、Acid and alkali、Sealing etc.

Precautions

*1: Choose one from item 7 and 8 or both.

*2: Choose one from item 7 and 8 or both.

*3: Customer can describe his requirements if do not have specified parameters.