

### Tailored Distortion™ Miniature SuperFisheye™ Lens



#### Description

The DSL182 lens is a miniature SuperFisheye™ lens with Tailored Distortion™ designed with a field of view of up to 194 degrees on 1/3.2" to 1/1.8" format imagers with HD resolution. The low F-number, thermal stability, and special distortion characteristics make this lens ideal for exterior based camera applications.

#### Key Features

- SuperFisheye FOV: 194°
- Tailored Distortion™
- Superior low light performance: F/2.2 aperture
- Compact size

### Optical Specifications

| Sunex PN DSL182           |                                      |
|---------------------------|--------------------------------------|
| Description               | Tailored Distortion™ Fisheye Lens    |
| Imager Format             | Up to 1/1.8"                         |
| Nominal Imager Resolution | 1080P                                |
| Focal Length              | 1.4mm                                |
| Relative Aperture (F/#)   | F/2.2                                |
| Image Circle              | 5.4mm                                |
| Field of View             | 194° at 5.4mm image circle           |
| Total Track Length        | 17.0mm                               |
| Distortion                | +14% from F-θ                        |
| Chief Ray Angle           | 13.5° at 5.4mm image circle, linear  |
| IR cut-off filter         | Optional IR cut-off filter at 650 nm |

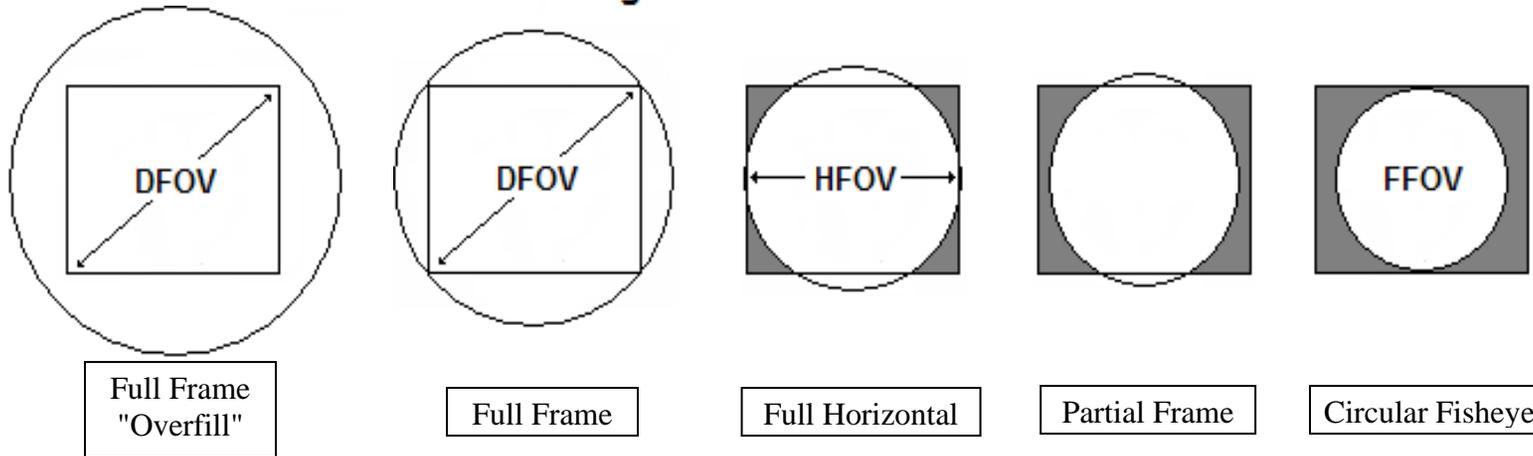
#### Applications

- Automotive Surround View
- Security and Surveillance
- Internet of Things (IoT)
- Computer Vision

Excellence in Digital Imaging Optics

Image circle format using a 4:3 aspect ratio imager:

### Image Circle vs. Sensor Format



*DSL182 on: 1/3.6" and smaller*

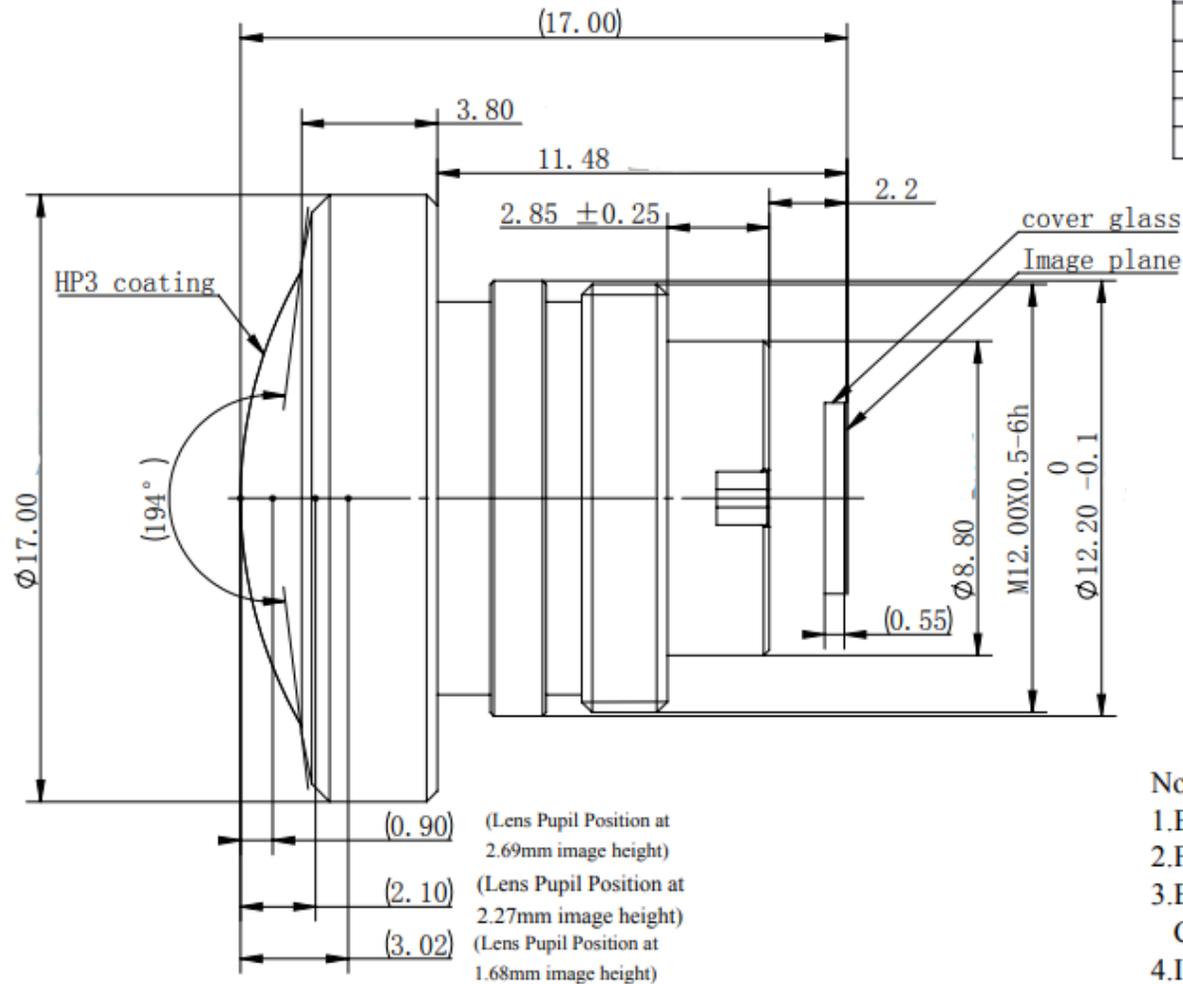
*~1/3.6"*

*~1/2.7"*

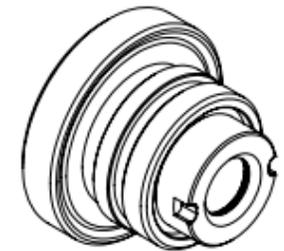
*~1/2.3"*

*1/1.8" or larger*

### DSL182G-650-F2.2 Mechanical Dimensions [mm]:



| Lens Pupil Position at Various image height |                       |
|---|-----------------------|
| Image height                                | Entrance pupil potior |
| 0mm   | 3.54mm                |
| 1.68mm                                      | 3.02mm                |
| 2.27mm                                      | 2.10mm                |
| 2.69mm                                      | 0.90mm                |



#### Notes:

- 1.EFL=1.4+/-0.1mm
- 2.F#=2.2+/-0.1
- 3.Barrel Material: Black anodized AL  
Cap Material: Black anodized AL
- 4.IR Cut coating: T=50%@650+/-15nm

### DSL182B-650-F2.2 and DSL182B-NIR-F2.2 Mechanical Dimensions [mm]:

Note: DSL182B is intended for use with Sunex CMT168 mount

