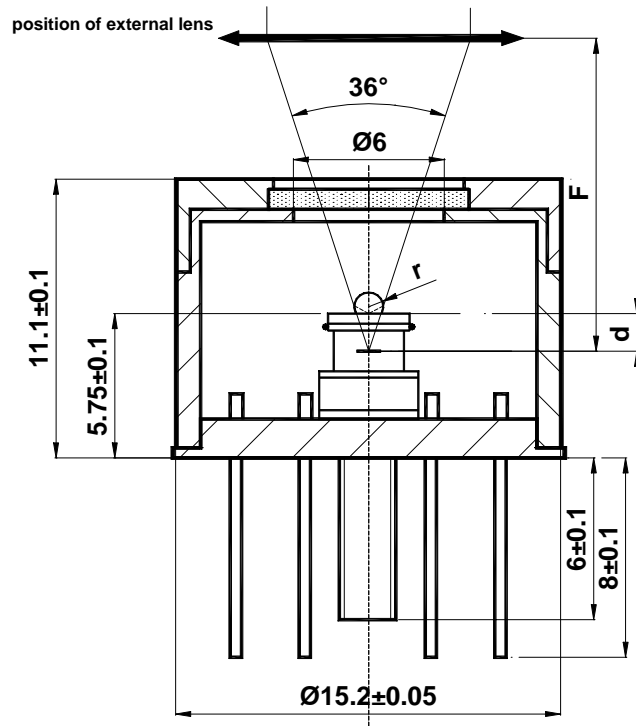


**THE FOCAL PLANE POSITION OF THE DETECTOR
IS DEPENDENT ON THE DIAMETER OF THE IMMERSION LENS
WHICH IN TURN IS VARIED WITH THE OPTICAL AREA OF THE DETECTOR**



**Vigo TO-8 style 2-stage TE-cooler package
With GaAs immersion lens**

F - focal length of the external optics, if any

n - index of refraction, which for GaAs is approximately 3.3; values vary with λ due to dispersion

Some details and examples				
Optical size of detector $L_{OPT} \times L_{OPT}$ <i>mm x mm</i>	0.5x0.5 and smaller	1x1	2x2	2x2 and 3x3
Diameter of the immersion lens $2r$, <i>mm</i>	1.0	1.6	2.5	3.2
Distance $d = r(n^2 - 1) / n$ from the base of the lens to the apparent plane of the detector, <i>mm</i>	1.5	2.4	3.75	4.8
Physical size of detector $L_{PHYS} = L_{OPT} / n^2$ <i>µm x µm</i>	46x46 and smaller	92x92	184x184	184x184 and 276x276