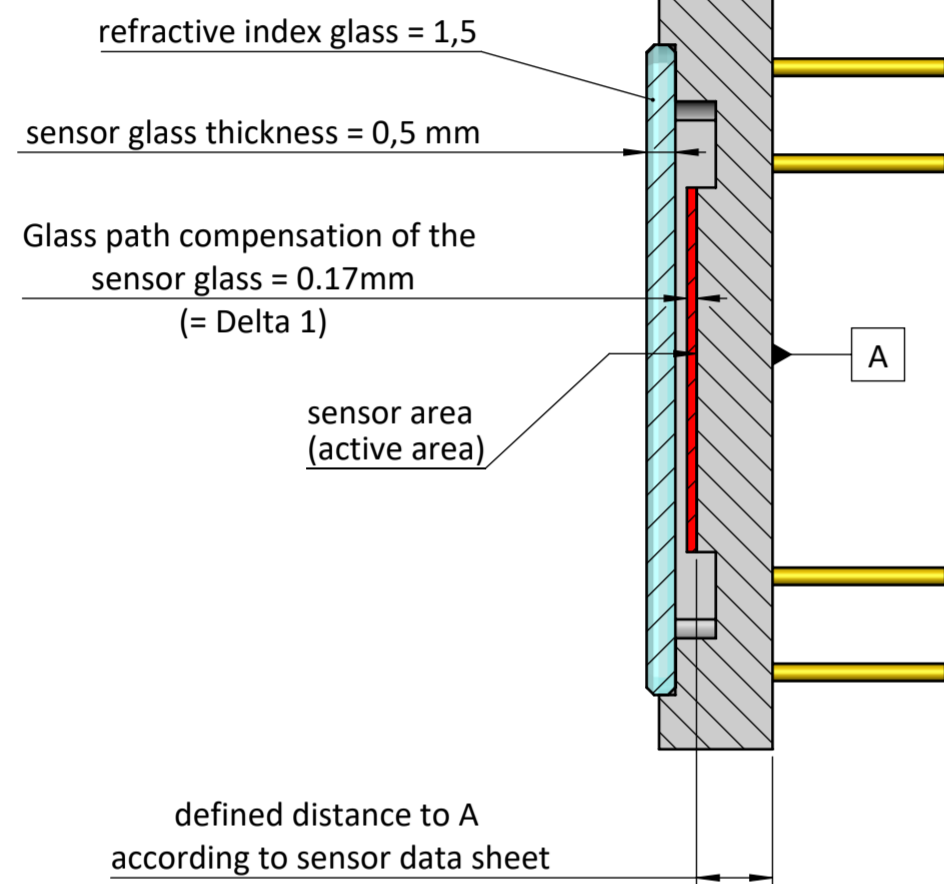


**How are our sensor models structured in CAD?**

**Our sensor models are generated exactly according to the data sheet, but the sensor surface is glass path compensated for further processing.**

Example representation of a compensated sensor model:



Delta 1 (sensor glass) = glass thickness (1-(1/refractive index glass))  
This delta must be added to the specified distance to A in the model

Example:  
glass thickness 0,5 mm  
refractive index 1,5  
delta = 0,5 mm (1-(1/1,5)) = 0,17 mm

**What has to be considered with regard to the glasses in the optical path (sensor glass / cover glass / filter glass) - compensation of the back focus?**

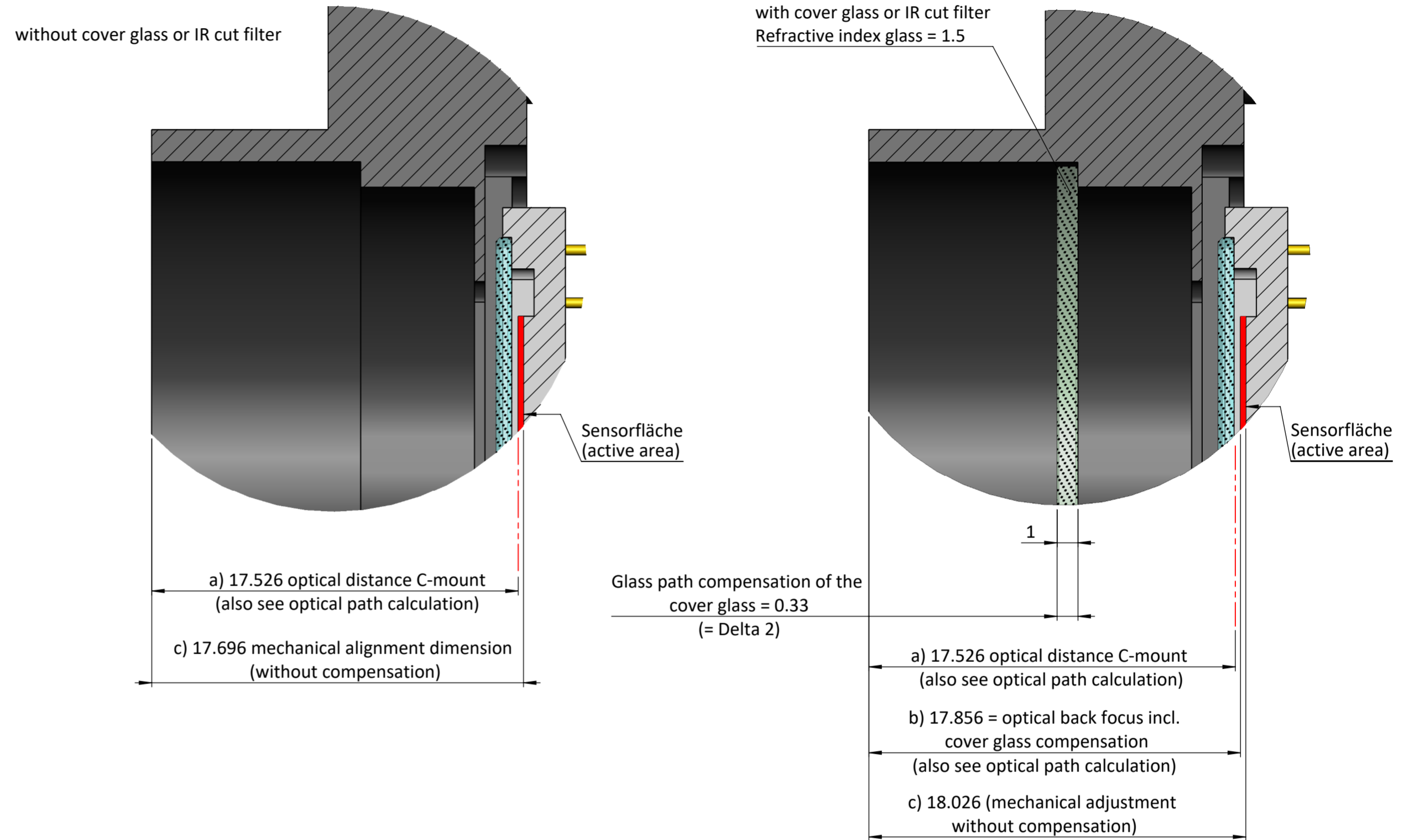
According to the formula of the optical path (also see sheet 2) the position of the sensor area has to be corrected as a function of the different glass thicknesses and also their refractive indexes as follows:

Path compensation = glass thickness x (1-1/ refraction index)

mechanical distance (example) = standard mount distance + delta 1 + delta 2  
delta 1 = 0,5 (1 - 1/1,5) = 0,17mm (sensor glass)  
delta 2 = 1,0 (1 - 1/1,5) = 0,33mm (cover / filter glass)  
= (C-Mount) 17,526 + 0,17 + 0,33 = 18,026mm (sensor area "active area")

This is taken into account with each of our cameras!

**Example illustrations of a C-mount with and without cover / filter glass:**



**NOTE:**

----- = only to represent the optical plane - no reference to surfaces or edges

		all dimensions in mm unless otherwise specified		Scale: 5:1	Rev.: 2
Customer Interface Drawing				Title: FAQ explanations glass path compensation for all SVS - cameras (example- C-Mount)	
Drawn: W. Schreiber	Name:	Sign:	Date: 26.01.2021	Material No.:	
Material:				A2	
Weight:				Blatt/Sheet 1 / 1	