

### 1. Fiber optic frontends: KL-M12-XL-... and KL-M18-XL-...

The **KL-M12-XL** as well as the **KL-M18-XL** types comes with a relative small light spot at a big distance. The frontends are mainly used in connection with the SPECTRO-1-FIO as well as the SPECTRO-3-FIO series. The following types are available: **KL-M12-XL-A2.0**, **KL-M12-XL-R1.1**, **KL-M12-XL-A1.1**, **KL-M18-XL-A2.0**, **KL-M18-XL-A1.1**, **KL-M18-XL-A3.0**, **KL-M18-XL-R1.1** and **KL-M18-XL-R2.1**. Typical spot diameters ( d ) for the **KL-M12-XL-A2.0** dependent of the distance ( x ) are: d / x in mm: 1.7 / 20, 2.5 / 30, 5.5 / 50, 10 / 75, 15 / 100 and for the **KL-M18-XL-A2.0**: d / x in mm: 4 / 90, 4.5 / 100, 6.5 / 125, 8.5 / 150, 11.5 / 200, 16.5 / 250, 20 / 300. The focus can be adjusted in changing the position of the optical fiber in the frontend. After adjustment the position of the optical fiber can be fixed with one of the plastic screws on the frontend.

