

Update of IEC60793-2-40 A4j

November 16th , 2022

Yuji Watanabe

AGC Inc.

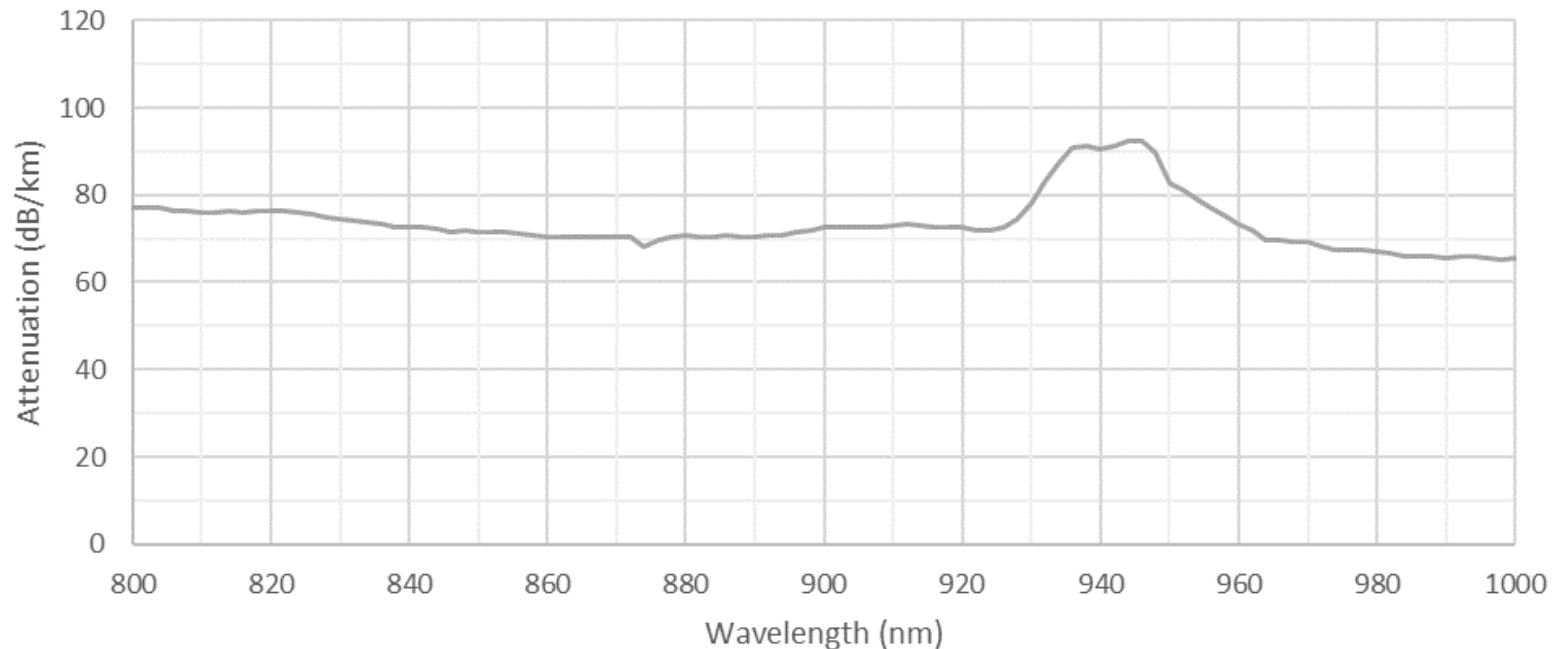
- Early revision of plastic optical fiber specification IEC60793-2-40 was proposed at IEC SC86A WG1 meeting in San Francisco
- Detail discussion will be continued in the correspondence group in IEC SC86A WG1
- Operation wavelength will be specified according to P802.3dh

Table 1 Addition of A4j

Sub-category	A4a		A4b	A4c	A4d	A4e	A4f	A4g	A4h	A4i	A4j
	A4a.1	A4a.2									
Core diameter (µm)	a		a	a	a	≥ 500	c	120	62,5	55	55
Cladding diameter (µm)	1 000		750	500	1 000	750	c	490	245d	490	490
Numerical aperture Naff	0,50	0,53	0,50	0,50	0,30	0,25	c	0,190	0,190	0,24	0,24
Operating wavelength(s) (nm)	650b		650	650	650	650	c	650 850 1 300	850 1 300	850	Align to 802.3dh
Applications	Digital audio interface, automobile, industrial, sensor and data transmission		Industrial and sensor	Sensor	Digital audio-visual interface and data transmission	Digital audio-visual interface and data transmission	c	Data transmission	Data transmission; primarily used in ribbon structures	Industrial data transmission	Automobile

- a Typically 15 µm to 35 µm smaller than the cladding diameter.
- b Other potential wavelengths for A4a fibre are described in Annex K.
- c This sub-category is outdated and therefore no more specified.
- d Cladding diameters of 490 µm and 750 µm are also possible.
- e Naff is numerical aperture measured by far field pattern method.

Spectral attenuation of A4j



- Widening operation wavelength is discussed in 802.3dh
- Absorption peak exist at 940 nm, but less than 100dB/km from 800 nm to 1000 nm wavelength range for A4j fiber

AGC