

length of ~16 m is between 140 and 180 ps, where the amount of the Stokes component power at 1270 nm in the output radiation of the Raman laser reaches 30%. The main factors limiting the proportion of the P₂O₅-generated Stokes component are generation of SiO₂-related Stokes radiation and incomplete transformation of the launched radiation caused by a comparatively short Raman laser cavity. Efficiency of transformation of the pumping radiation into a P₂O₅-related component was limited in the present work by significant optical losses at splicing points between the P₂O₅ fibre and another fibre with a different numerical aperture, in which Bragg gratings were recorded. Fibres with matching numerical aperture or a ring Raman laser cavity [20] can be used to eliminate these losses.

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