

Title (en)

LASER SPARK PLUG AND METHOD FOR OPERATING THE SAME

Title (de)

LASERZÜNDKERZE UND BETRIEBSVERFAHREN HIERFÜR

Title (fr)

BOUGIE D'ALLUMAGE LASER ET PROCÉDÉ PERMETTANT DE FAIRE FONCTIONNER LADITE BOUGIE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2011060983A1] The invention relates to a laser spark plug (100), in particular for an internal combustion engine of a motor vehicle, having a combustion chamber window (120) arranged in an end region (100a) facing toward a combustion chamber. According to the invention, means (130) are provided for cooling a volume region (210) situated in the region of the combustion chamber window (120) and/or for cooling a medium situated in the volume region (210). The means for cooling (130) have a cooling body which has material with relatively high thermal conductivity, in particular with a thermal conductivity of approximately 90 watts per kelvin-meter at room temperature or higher. The cooling body (131) is formed substantially in the shape of a circular ring. An inner diameter (D1) of the cooling body (131) in the region of an end side (131a) of the cooling body (131) facing toward the combustion chamber is smaller than an inner diameter (D2) of the cooling body (131) in the region of an end side of the cooling body (131) facing away from the combustion chamber. Heat conducting means (140) are provided which permit a dissipation of heat from an end region (100a) of the laser spark plug (100) facing toward the combustion chamber in the direction of an end region (100b) facing away from the combustion chamber.

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