

DESIGN OF LOW TEMPERATURE SYSTEM TO INFRARED SPACE TELESCOPE

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Abstract

With growing sophistication in infrared detection technology, the target temperature becomes lower. This paper mainly focuses on the design of the cooling system, which is used on the infrared space telescope. The primary temperature of optical system formed by Micro-crystal glass was reduced to $110\text{K}\pm 5\text{K}$ and the temperature of infrared detector was reduced to $60\text{K}\pm 3\text{K}$ by using the Refrigerationry. And the experimental test was made for certifying the result of theoretical analysis.