

光学测量

CCD相机调制传递函数测试软件的研制

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收稿日期 修回日期 网络版发布日期 2007-1-27 接受日期

摘要

数学傅立叶分析法是测量调制传递函数常用的一种方法, 为了迅速地给出采用该方法进行调制传递函数测试的结果, 针对刀口扫描测试CCD相机调制传递函数的测试系统研制了测试软件。软件可读入CCD相机摄取的数字图像文件, 对数据进行消噪声处理, 并自动识别刀口位置, 选择合适区域计算出相机的调制传递函数。软件采用VC语言编制, 结果以列表和曲线两种形式输出, 用户界面良好, 使用方便。利用该软件得到的测试结果与俄罗斯软件的计算结果吻合较好。

关键词 [调制传递函数](#) [刀口扫描](#) [CCD相机](#)

分类号 [TN386.5](#)

Development of a Test Software for the Modulated Transfer Function of CCD Camera

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Abstract

Fourier analysis method is often used to measure the modulated transfer function MTF results quickly. And for this reason, the software for testing the optical transfer function of CCD camera is developed based on the knife-edge scan method. With this software, digital image files obtained by CCD camera can be read in, the noise among the data can be filtered and the position of the knife-edge can be auto-identified then the suitable area can be chosen to calculate the optical transfer function of the CCD camera. This software, which has a favorable user's interface, is developed with Visual C++ and can be operated conveniently. The calculated results can be outputted as both list and format. Our testing results are consistent with those gotten from Russian software.

Key words [modulated transfer function\(MTF\)](#) [knife-edge scan](#) [CCD camera](#)

DOI:

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