DASCOM

SOLUTIONS FOR BUSINESS PRINTING

智能卡打印机--耗材篇
Card Printer--Consumable

本PPT思路 PPT Thread

1. Ribbon

2. Transfer Film

3. Laminate

一、色带篇
Ribbon

1.1 升华型色带作用原理 The operating principle of sublimation type ribbon

Sublimation type

1.2 升华型色带打印效果The print result of the sublimation type ribbon

The print result of the sublimation type ribbon

1.2 熔融型色带作用原理The operating principle of melting type ribbon

Melting type

1.2 熔融性色带打印效果The print result of the melting type ribbon

Y

M

C

混色

1.3 优缺点分析 Analysis of advantage and disadvantage

Type	Printer quality	Color stability	Price	Use brand
Melting type	Good（narrow color gamut）	Best	High	TOPPAN
Sublimation type	Best（wide color gamut）	Good	Middle	A majority of brand in the market（EVOLIS、ZEBRA FARGO,etc）

2.1 什么是Y、M、C、K? What is Y、M、C、K?

RGB is the three primary color from incident light or through the light. The display board of the digital camera or computer is RGB.

YMCK is to describe the three primary color of the incident light. YMCK is used in oil painting and printer.

2.2 保护&防伪“O”层 Protection & security “O” layer

There still exist YMCKO except standard ribbon YMCK.”O” layer is used to protect the printing element of card and the security.

PS: “T” layer of DATECARD, the similar function, that is YMCKT(T: TOPCOAT)

2.3 防伪Uv色带Security Uv ribbon

By fluorescent security ribbon (YMCK UV)
You can easily fluorescent security printing

By UV fluorescent light may show an image you print documents in order to ensure your safety

2.3 防伪Uv色带Security Uv ribbon

3.1 常见色带-YMCK Standard ribbon-YMCK

YMCK ribbon can be used in the single-sided or dual-sided color print. Full color print (Y/M/C) and monochrome text or barcode (K) and various collection is available. K is black resin. Ribbon should be used with transfer film.

3.2 常见色带-YMCKO Standard ribbon-YMCKO

Except the standard color yellow, magenta, cyan and black, YMCKO ribbon will apply a protection layer on the card, which can ensure the card still can be printed with high-quality after being used frequently. This procedure can improve the image and logo quality to make the resolution reach 300DPI, which ensure the high-quality print result.

3.3 YMCKO-半格色带YMCKO-half panel ribbon

Half panel ribbon is suitable for printi
colorful identification photo and text, logo or barcode. The identification photo can be printed colorfully, and the other content can be printed with black resin.

Mainly used in student card, transportation card, employee card, VIP card and driver’s license.

3.4 YMCKOK

This ribbon is divided into six panels, yellow, magenta, cyan, black, laminate and black.

Used in colorful dual-sided printing, which the front is high-quality resolution and the back is black resin print.

3.5 UcYMCK （DTC）

Uc is one color panel on the color ribbon and print before Y,M,C,K, etc color panel. Transparent layer (Uc) cover on the card surface through direct to card (DTC) printer. Afterward, to customize the D2T2 (sublimation transfer) color card (single-sided or dual-sided) can continue.

3.6 单色色带Monochrome ribbon

Monochrome print use one color to print, which is the most economic technology to make customized card. It substantially reduce the cost. When being used, it can increase the card quantity of every ribbon to print. Main color is black resin + laminating, black, blue, red, green, white, golden and silver.

3.7 刮刮膜色带Scratch-off ribbon

Scratch-off ribbon is a special ribbon. It is grey and can be eliminate through scratching. This function is used for covering the amount and password on the gift card.

3.8 白色签名条色带White signature ribbon

白色签名条色带可以让您在卡片上打印一个区域，用于拿笔直接书写。

White signature ribbon can be printed out an area where you can write your signature on the card.

3.9 常见色带类型汇总Summary of the ribbon type

Type	YMC	YMCK	YMCKO	YMCKOK	YMCKOKO	Monochrome ribbon	Special ribbon
Direct to card printer	●	●	●	●	●	●	●
Retransfer printer		●					
Single-sided	●	●	●	●	●	●	●
Dual-sided	●	●	●	●	●	●	●
Use life (year)	3	3	3	3	3	3	3

3.10 常见色带防伪Common ribbon security

二、转印膜篇
Transfer film

1 转印膜作用Transfer film function

Transfer film is used in retransfer printer. Contents are transferred to transfer film in the first time and the contents on the transfer film are transferred to the card in the second time, which achieve the over edge print.

2 转印膜作用原理The theory of transfer film

Case 1
Foreign particle on re-transfer film

Case 2
Foreign particle on blank card

2 转印膜作用原理The theory of transfer film

3 转印膜使用对比Use comparison of the transfer film

1、Before the transfer

2、During the transfer

3、After the transfer

3 转印膜使用过程The using process of transfer film

Before the first transfer

During the first transfer

During the second transfer

三、覆膜篇
Laminate

1. 覆膜介绍 Introduction of laminate

Holographic laminate can prevent card from water and oil to increase security and durability.
Usual laminate is using PET which is compatible with PVC or composite card.

NATIONAL ID CARD
REPUBLIC OF EVOLAND
N° XNBTE258 001
Del Montogina
Clara Anna
IT
11/11/1988
Florence
F
01/04/2005
01/04/2015
1,82m
Polizia di Stato
MCMXLVII
Evolis
P<ITSPECIMEN<<CLARAANNADELMONTOGINA<<<<<<<<<<<<<<<
0003258742 18<2569<23598<<<<<<<23589<<<<<<<<<<<<<<00

3.1 全幅面全息补丁膜 laminate for full surface

Patch on the full surface of the card (near to edge)

Using for not encoding option card and contactless smart card. Patch on the full surface for single-sided or dual-sided

3.2 磁条卡幅面全息补丁膜 Laminate for magnetic strip card

Layout for cards with a magnetic stripe

应用于磁条所在幅面覆膜
Laminate for cards with a magnetic stripe

3.3 SIM 卡幅面全息补丁膜 laminate for SAM card

Layout for contact smart cards

单面全息补丁膜将芯片区域剪适用于接触式SIM智能卡片。

Cutting laminate properly for SAM card

5 常用防伪技术简介 security

Overt：明显
Covert：隐秘

装饰图形
Guilloche Pattern (overt)
Highly complex, multiple-color design pattern generated by a mathematics formula. Virtually impossible to reproduce by copy machine or to re-create digitally.

红外油墨印刷
Infrared Ink Printing (covert)
Uses special ink that reacts (fluoresces) when subjected to a specific frequency of laser light.

图形框
Photo Box (overt)
A portion of the card design specifically allocated for the digital imaging of the card recipient's photograph.

透明框
Clear Window (overt)
Card is constructed with a clear core material to deter any attempt to create a counterfeit card from common card stock.

激光全息镭射薄膜
2-D Holographic Foil (overt)
Method of producing a two-dimensional image of an object by recording on a photographic plate or film the pattern of interference formed by a split laser beam, and then illuminating the pattern either with a laser or with ordinary light. 3-D holographic foil also available.

光学变色油墨
Optical Variable Ink (OVI®) (overt)
Optical variable ink is a high security feature showing different colors as the angle of view changes. Optical Variable Ink can have a support printing by a dark color shade to get a luscious color effect.

5 常用防伪技术简介 usual technology for security

Overt：明显
Covert：隐秘

透明标记打印

Opacity Mark Printing (covert)
An image is printed on the inner layers of the card material, making it visible only via the direct application of an intensely focused light source.

接触式芯片

Contact Chip (overt)
An embedded microchip within the card layers that allows for large amounts of data storage and management. Chip is protected by a contact "plate" available in gold or silver.

Micro Text Printing (covert)
Small text that is only visible with an 8x or 10x magnifying loop; typically has a predetermined misspelling or transposed character.

小文字打印

Contactless Chip (overt)
An embedded microprocessor chip within the card layers that is read via radio signals rather than physical contact.

非接触式芯片

磁条

Magnetic Stripe (overt)
Magnetic band capable of storing data by modifying the magnetism of tiny iron-based particles.

黑色光活性墨水打印

Black Light-Reactive Ink Printing (covert)
Uses ink that glows under an ultraviolet light. Available in red for added security.

序列化

Serialization (overt)
Unique numbering printed on the card specified by the customer.