

LASER MARKING AND ENGRAVING

Laser Marking Project Brief and Sample Evaluation Request

EMAIL THIS FORM TO
sales@vytek.com

All forms: vytek.com/smp

QR CODE
vytek.com/smp?process=marking

Use this form to describe your marking application and request a sample evaluation. You do not need a laser system to start, and you are not expected to know process times, achievable quality or cycle times. Those are what sample evaluation is for. Complete what you know; where you are unsure, choose "Vytek to determine" or leave it blank.

1 DESCRIBE	2 SEND FILES	3 SHIP SAMPLES	4 CONFIRM SCOPE	5 GET RESULTS
Complete Parts 1 to 3. Skip anything you do not know.	Email this form, drawings, photos and video to sales@vytek.com . Forms for each process are at vytek.com/smp .	Print a copy of this form and include it with labeled samples.	Vytek confirms scope, timing and any cost within three business days of receiving complete information.	Receive a Sample Evaluation Report with photos, results and cycle-time estimates.

SAMPLE EVALUATION SCOPE AND COST

Most initial sample evaluations are performed at no charge. Where testing requires custom fixturing, extended development, multiple iterations or formal reporting, Vytek will confirm scope and any cost before work begins. Results are laboratory estimates; production performance is confirmed during acceptance testing of the final system.

PART 1 · PROJECT BRIEF

About you, your part and your production

01 CONTACT AND COMPANY

Company		Facility / location	
Primary contact	Title / department	Date	
Phone	Email		
Project name / reference		How did you hear about Vytek?	
Industry ☐ Aerospace / defense ☐ Electronics / semiconductor ☐ General fabrication ☐ Automotive / transportation ☐ Energy / batteries ☐ Other ☐ Medical device ☐ Tooling / molds			

02 PROJECT STATUS AND TIMING

Project status ☐ Initial investigation ☐ Replacing existing equipment ☐ Other			☐ Budgetary planning ☐ Production problem / capacity need			☐ Active capital project ☐ Approved project / sourcing		
Desired equipment timing ☐ Immediately ☐ 6–12 months			☐ Less than 3 months ☐ More than 12 months			☐ 3–6 months ☐ Not yet determined		
Target installation date, if known				Budget range, if established (optional)				

03 APPLICATION AND CURRENT PROCESS

Briefly describe what you need to mark, and why

What are you trying to improve?

- | | | |
|--|---|---|
| ☐ Throughput / capacity | ☐ Mark quality / readability | ☐ Permanence / durability |
| ☐ Operator dependence | ☐ Traceability / compliance | ☐ Replace labels, ink or chemicals |
| ☐ Consumable cost | ☐ Automation | ☐ Other <input type="text"/> |

Is this process performed today?

- ☐ Yes ☐ No ☐ New product / new process

Current method

- | | | |
|--|---|--|
| ☐ Existing laser | ☐ Dot peen | ☐ Chemical / electrochemical etch |
| ☐ Inkjet / printing | ☐ Label | ☐ Mechanical engraving |
| ☐ None / new | ☐ Other <input type="text"/> | |

Existing equipment make / model

Current time per part or rate, if known

What problems or limitations do you have today?

04 PART AND MATERIAL

Part name

Part number(s)

Number of part types

Smallest part (L × W × H)

Largest part (L × W × H)

Weight range

Material

- | | | |
|---|---|---|
| ☐ Carbon / mild steel | ☐ Stainless steel | ☐ Tool steel |
| ☐ Aluminum | ☐ Anodized aluminum | ☐ Titanium |
| ☐ Copper / brass | ☐ Nickel alloys | ☐ Carbide |
| ☐ Ceramic / glass | ☐ Silicon / semiconductor | ☐ ABS / PC / nylon |
| ☐ PEEK / other polymer | ☐ PCB / electronic substrate | ☐ Composite |
| ☐ Other <input type="text"/> | | |

Specific alloy / grade, if known

Coating or finish type and thickness, if any

Surface condition

- | | | |
|--|---|--|
| ☐ Bare / as received | ☐ Machined | ☐ Polished / ground |
| ☐ Painted | ☐ Powder coated | ☐ Anodized |
| ☐ Plated | ☐ Heat treated / passivated | ☐ Oxidized / rusted |
| ☐ Oily / contaminated | ☐ Other <input type="text"/> | |

05 PRODUCTION AND HANDLING

Required output (parts per hour or takt)

Shifts per day / days per week

Annual volume

Required cycle time per part, if known

Typical batch size / changeovers per shift

Do not know your cycle time? Leave it blank. The sample evaluation measures laser process time and estimates total cycle time for different ways of loading and unloading parts.

Production type

- ☐ Continuous
 ☐ Batch
 ☐ High-mix / low-volume
 ☐ Low-mix / high-volume
- ☐ Prototype / R&D
 ☐ Job shop / contract

How do parts arrive and get presented today?

- ☐ Operator loads one at a time
 ☐ Fixture / nest
 ☐ Tray / pallet
- ☐ Conveyor
 ☐ Robot / cobot
 ☐ Existing production line
- ☐ Bulk / loose
 ☐ Unknown
 ☐ Other

Desired level of automation

- ☐ Manual workstation
 ☐ Semi-automatic
 ☐ Fully automatic
- ☐ Integrated into existing line
 ☐ Automation Ready (automate later)
 ☐ Vytek to recommend

06 WHAT GOOD LOOKS LIKE

Describe acceptance criteria: what makes a part good or rejected?

Can you provide good and rejected examples (parts or photos)?

☐ Yes
 ☐ No
 ☐ Some

Top priorities (choose up to three)

- ☐ Mark quality / contrast
 ☐ Code readability / grade
 ☐ Cycle time
 ☐ Permanence / durability
- ☐ Small feature size
 ☐ Minimal heat effect
 ☐ Capital cost
 ☐ Ease of operation
- ☐ Future expandability

07 WHAT VARIES?

Variation drives automation. Mark what changes from part to part or batch to batch. The perfect part is easy; production lives in the exceptions.

- ☐ Part position / orientation
 ☐ Part height / flatness
 ☐ Part size / geometry
- ☐ Material or alloy
 ☐ Finish / coating / color
 ☐ Mark content per part
- ☐ Mark location changes
 ☐ Fixtures / trays
 ☐ Frequent new part numbers
- ☐ Other

Describe the variation or exceptions you see most often

PART 2 · MARKING DETAILS

Tell us what the mark must contain, look like and survive

08 MARK CONTENT AND DATA

Information to be marked

- | | | |
|---|--|---|
| ☐ Fixed text | ☐ Serial / sequential numbers | ☐ Date / lot / shift |
| ☐ Part number | ☐ Logo / graphics | ☐ 1D barcode |
| ☐ Data Matrix | ☐ QR code | ☐ UID / UDI |
| ☐ Graduations / scales | ☐ Other <input type="text"/> | |

Where does variable data come from?

- | | | |
|---|---------------------------------------|--|
| ☐ Operator entry | ☐ Barcode scan | ☐ Work order / CSV file |
| ☐ Database / MES / ERP | ☐ PLC | ☐ Not applicable |
| ☐ Other <input type="text"/> | | |

Number of characters / lines

Font or text style required

Data to log after marking

09 MARK APPEARANCE AND SIZE

Type of mark

- | | | |
|--|---|--|
| ☐ Surface / high contrast | ☐ Black annealed (no material removed) | ☐ Engraved |
| ☐ Deep engraved | ☐ Light / white mark | ☐ Color mark (plastics) |
| ☐ Coating / paint removal | ☐ Other <input type="text"/> | ☐ Vytek to recommend |

Mark area (W × H)

Total area of all marks (X × Y)

Min. character height

Data Matrix cell size

Required depth, if any

Location on part (or mark up a drawing)

Are there cosmetic requirements?

- ☐ Yes ☐ No ☐ Unknown

Describe appearance requirements or reference an acceptable sample or photo

10 MARKING SURFACE AND GEOMETRY

Marking surface

- | | | | |
|---|---|---|--|
| ☐ Flat | ☐ Cylindrical (OD) | ☐ Inside diameter | ☐ Conical |
| ☐ Curved / contoured | ☐ Irregular / 3D | ☐ Multiple heights | ☐ Multiple surfaces |

Height variation within marking area

Wrap angle, if marking around a diameter

Must the mark follow the part contour?

- ☐ Yes ☐ No ☐ Unknown

Is rotary motion likely needed?

- ☐ Yes ☐ No ☐ Vytek to determine

Required mark-position accuracy

Part-to-part position variation

11 QUALITY, DURABILITY AND VERIFICATION

Code standard / grading

- | | | |
|---|---|--|
| ☐ None specified | ☐ AIM DPM / ISO/IEC TR 29158 | ☐ ISO/IEC 15415 |
| ☐ ISO/IEC 15416 | ☐ MIL-STD-130 / UID | ☐ UDI |
| ☐ Customer specification | ☐ Unknown | |

Required minimum grade

Customer or industry marking specification

The mark must survive

- | | | |
|---|--|--|
| ☐ Washing / cleaning | ☐ Passivation | ☐ Autoclave / sterilization |
| ☐ Heat treatment | ☐ Painting / coating over | ☐ Abrasion / wear |
| ☐ Corrosion / salt spray | ☐ Chemicals / solvents | ☐ Outdoor / UV exposure |
| ☐ Other <input type="text"/> | | |

Is marking done before or after a finishing step?

- ☐ Before ☐ After ☐ Unknown

Verification after marking

- | | | |
|------------------------------------|---|---|
| ☐ None | ☐ Barcode / Data Matrix read | ☐ Code grading |
| ☐ OCR / OCV | ☐ Position verification | ☐ Automatic reject of failed parts |

Vision needed to locate parts or verify marks?

- ☐ Yes ☐ No ☐ Vytek to determine

Laser type, if you have a preference

- | | | | |
|--------------------------------|-------------------------------------|---|------------------------------|
| ☐ Fiber | ☐ MOPA fiber | ☐ UV | ☐ CO2 |
| ☐ Green | ☐ Ultrafast | ☐ Vytek to recommend | |

PART 3 · SAMPLES, FILES AND SUBMISSION

What to send and where to send it

12 SAMPLES

Can sample parts be supplied?

☐ Yes ☐ No ☐ To be determined

Send blank (unmarked) parts in each material and finish, plus an existing marked part or photo if you have one. Include worst-case parts, such as the most curved or darkest finish. Label each sample with your company name and a sample ID.

SAMPLE ID	DESCRIPTION / VARIATION (TYPICAL, WORST CASE, FINISH)	QTY	NOTES

May samples be permanently processed or destroyed?

☐ Yes ☐ No ☐ Limited quantity

May Vytek section or cut samples if needed?

☐ Yes ☐ No ☐ Ask first

After testing, samples should be

☐ Returned to address below ☐ Scrapped by Vytek ☐ Untested parts returned only

Coated, treated or hazardous material? Safety data sheet attached

☐ Yes ☐ No ☐ Not applicable

Export control: do not send export-controlled technical data or parts (ITAR / EAR) without contacting Vytek first. Files and data you send are kept for the evaluation and follow-up, and deleted on request.

What should the evaluation tell you?

☐ Feasibility / can it be done ☐ Marking time per part ☐ Mark quality and contrast (photos)
☐ Code grade (Data Matrix / barcode) ☐ Depth measurement ☐ Durability after test
☐ Cycle-time estimate with handling ☐ Recommended laser and configuration

13 FILES, PHOTOS AND VIDEO

Included with this request

☐ Part drawing (PDF with dimensions) ☐ STEP / 3D CAD ☐ Part photos
☐ Video of current process ☐ Good / rejected examples ☐ Quality specification
☐ Fixture / tray drawings ☐ Mark artwork (DXF / AI / vector) ☐ Font / text layout
☐ Code specification ☐ Other

Photo tips: photograph each part beside a ruler, show the area to be processed close up, show how parts arrive and leave the station, and include good and rejected examples. Large files: email sales@vytek.com and we will send a secure upload link.

14 RETURN SHIPPING AND SUBMISSION

Return ship-to company and attention

Carrier / account number (optional)

Return street address, city, state, ZIP

Date samples will ship

Tracking number

Submitted by

Additional notes or instructions for the applications engineer

SEND FILES AND SAMPLES

Email this form and your files to sales@vytek.com. Ship samples, with a printed copy of this form, to: Vytek, Attn: SMP Dept, 195 Industrial Road, Fitchburg, MA 01420, USA. Questions: 978-342-9800.

QR CODE
vytek.com/smp
?process=marking

WHAT YOU WILL RECEIVE

A Sample Evaluation Report with photos of marked samples, measured marking time per part, contrast and code-grade results where applicable, depth measurements where requested, consistency across samples, estimated total cycle time for manual and automated handling, identified risks, and a recommended laser type, configuration and next step.

FOR VYTEK USE

SMP number

Date received

Applications engineer

Sales contact

Evaluation level

☐ Feasibility check

☐ Process evaluation

☐ Process development (quoted)

Scope and cost confirmed with customer (date / by)

Report due